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ABSTRACT

Presented is a curriculum guide for mainstreaming educationally handicapped elementary school children. Activities are provided for the following skill areas: listening skills (including recognizing different typ s of sounds and understanding oral directions), visual perception (including figure-ground perception and form constancy), general concept development (including time and "set" concepts), quantitative concept development (including addition and subtraction), and miscellaneous curriculum sequences (including spelling and geography). It is explained that the activities emphasize sequencing and self correcting techniques. (CL)

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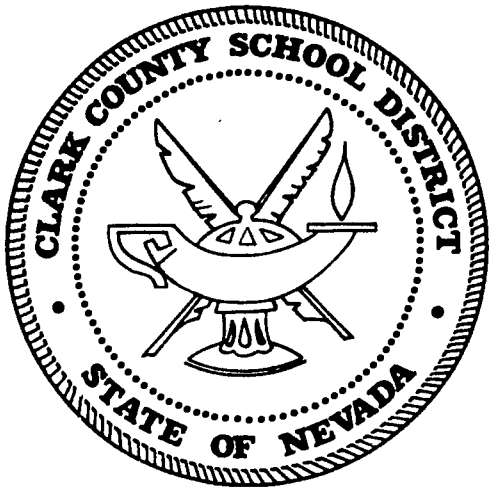
Curriculum Ideas For Mainstreaming Exceptional Children



TITLE VI

1974-1975

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CURRICULUM IDEAS
FOR THE
ELEMENTARY EDUCATIONALLY HANDICAPPED STUDENT

Mainstreaming of Exceptional Children
1974-75 School Year
Clark County School District
Las Vegas, Nevada

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Background Information

The curriculum ideas included in this book were selected from the materials submitted by experienced teachers of educationally handicapped students enrolled in classes taught by Dr. Alice Thompson, Project Director - Learning & Behavior Problems Project Associate Professor of Psychology - California State College at Los Angeles. Credit is given to all students where this information was available.

The compilation of these submitted materials has several purposes - with the major purpose being to give resource teachers in the District some ideas on the types of materials developed by other experienced teachers. Additionally, emphasis is placed on sequencing and self-correction techniques. (When a child experiences frustration with a concept - "sequence it.") If the sequencing can be corrected by the student himself, it will leave more time for the teacher to help others.

I hope the curriculum ideas included in this book will be beneficial in aiding the resource teachers in developing an effective learning program for the children participating in the Mainstream Project.

Richard W. Cansdale

Section A

DEVELOPING LISTENING SKILLS

The ability to listen is of more importance than the ability to read. Most of our daily communication involves listening. Children who have reading problems need to rely on this skill even more than the academically able child.

Listening is not just hearing, but also understanding, associating, infering and in general, acting upon what is heard.

Example a - pages 2 - 3
Retaining and recalling information

Example b - pages 4 - 6
Recognizing different types of sounds

Example c - pages 8 - 10
Identifying sense from nonsense in sounds

Example d - pages 11 - 14
Ability to respond to the spoken word

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Understanding oral directions

AUDITORY MEMORY

GOAL: To give the child the ability to retain and recall general auditory information.

OBJECTIVES:

1. To teach the child what he is hearing is important.
2. To teach the child he will be expected to recall what he has heard.
3. To teach the child to relate what he has heard.

I. Repeat after me:

a. I see a bird.
b. I see a bird and a cat.
c. I see a blue bird and a cat.
d. I see a blue bird and a white cat.
e. I see a blue bird and a white cat fighting.

II. Do tapping sequence with pencil. Child repeats what he has heard.

.. .
.. .
.. . ..
. . ..

III. I will say these numbers. Child then repeats.

a. 4-3
b. 7-1-2
c. 6-4-8-5
d. 0-1-4-9-5

IV. I will name fruits. Child will recall the ones mentioned.

a. apples
b. oranges, apples
c. apples, oranges, bananas
d. grapes, plums, cherries
e. prunes, grapes, apples, lemons, bananas

V. a. I went to the store and bought milk, bread and butter.

What did I buy?

b. Mr. and Mrs. Smith live in the city of San Francisco.

Who lives in the city?
What city do Mr. and Mrs. Smith live in?

by

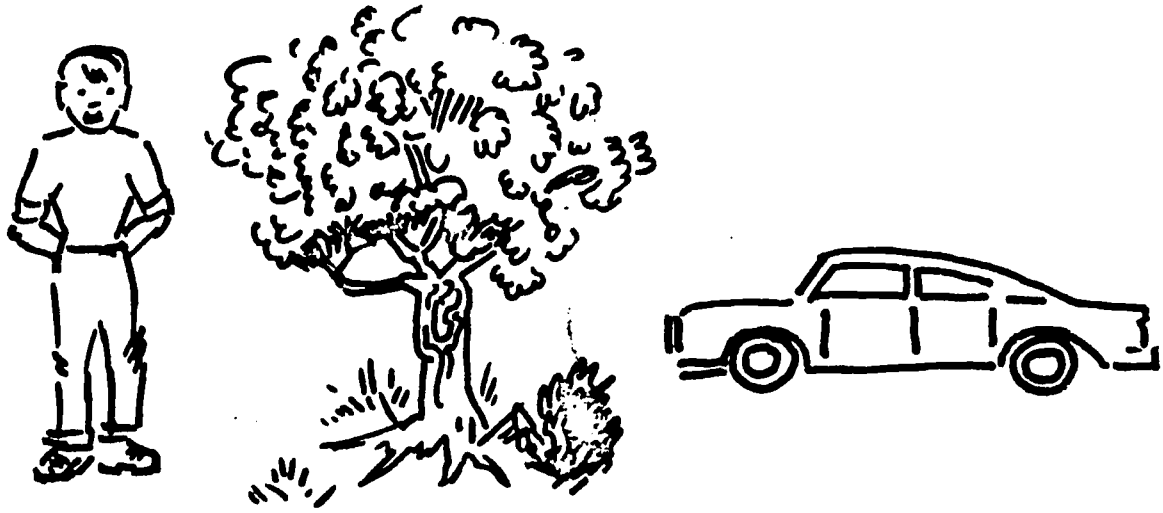
Bobbie Alexander

VI. Spell out various words, child writes down what they are heard as:

back stick trick shack

VII. Oral directions on tape

a. Color the car. Draw a circle around boy.
b. Draw a line from car to the tree and from tree to boy.



VIII. Game: Use many ways

I'm going on vacation.
I plan to take apples.
Next: I'm going on a vacation and I plan to take apples and an ax.

IX. Read a poem, then ask questions

If I had a hundred dollars to spend
Or maybe a little more

I'd hurry as fast as my legs would go
Straight to the animal store.

How much money did he wish he had?
Where would he go?
What kind of store?
How would he get there?

X. Child listens to story on tape. He, in turn, tells you the story.

It was a beautiful day and it was the first day of summer vacation. John and Tom decided to go fishing. They took their poles and rode their bikes over to the reservoir. John and Tom were lucky. They caught ten fish.

GROSS SOUNDS

(Primitive level)

Specific Objectives: The specific objectives of this program are to develop the child's ability to:

a. attend to gross sounds
b. recognize sounds as being near-far, loud-soft
c. match correctly the object and the sound it produces
d. recognize sameness and difference in sounds

A. ATTEND TO GROSS SOUNDS

1. Materials:
   a. tape recorder or records
   b. taped sounds - electronic sound recordings

2. Procedure: (primitive level)
   At this level, the sound presented need not be familiar to the child's environment. The purpose at this point is to arouse interest and stimulate listening.

   There are commercial tapes and records available. An excellent record published by Vanguard Records is "In Sounds from Way Out", by Perry and Kingsley. Electronic sounds at intervals and at a high level of loudness tend to hold the child's interest. During the intervals, the teacher should ask such questions as:

   a. What did you think that sound was?
   b. What did it make you think of?
   c. What have you heard that sounded like that?

   This lesson should be presented several times with new sets of questions about the sounds at each presentation. Physical participation can take place by having the child act out his concept of the sound. For example, some children have pretended they were rockets in outer space; others felt like a pogo stick and jumped up and down. After the children have experienced and learned to attend to unfamiliar sounds, the teacher should introduce the second specific objective.

B. RECOGNIZE SOUNDS AS NEAR-FAR, LOUD-SOFT.

1. Materials:
   a. tape recorder or records
   b. tapes of sounds which are presented in pairs. The first sound of a pair should be very loud. The second sound should be soft.

2. Procedure:

A pair of sounds are presented to the children. The teacher asks such questions as:

a. Was the first sound louder than the second?
b. Which sound seemed to be the loudest -- the first one or the second one?
c. Did the first sound seem to be closer?
d. Did the second sound seem to be far away?

When the teacher is certain that this concept has been established, the third objective can be presented. This can be introduced by saying, "Now we are going to listen to some sounds that we hear around us every day."

C. MATCHING A SOUND WITH SPECIFIC OBJECTS

1. Materials:
   a. tape recorder or records
   b. taped sounds of noises in the child's environment
      1. telephone ringing
      2. whistle
      3. clattering of pots and pans
      4. water running from a faucet
      5. fire engine siren
      6. vacuum cleaner
      7. other sounds recorded by the teacher
   c. large picture cards of each object presented on the tape (actual objects could be used)

2. Procedure:

The teacher starts this lesson by saying, "Today we are going to listen to some sounds that we hear around us. Then, we will play a game to see who can pick out the picture that goes with the sound." After this activity, the teacher can test the children to see if the concept has been internalized by giving each child a mimeographed sheet with three pictures for each sound. Only one picture would match the object for each sound. As the tape is played, the child is asked to draw a circle around the picture that represents the object making the sound (see sample work sheet). When this concept has been internalized by all of the children, the teacher should move to the final objective of recognition of the difference and sameness of gross sounds.

D. RECOGNITION OF SAMENESS OR DIFFERENCE IN SOUNDS

1. Materials:
   a. tape recorder or records
   b. taped sounds presented in pairs -- some pairs will be alike; other pairs will be different

      Example: 1. horn - horn
               2. bell - horn
               3. bell - bell
               4. dog's bark - cat's meow

2. Procedure:
   The teacher presents one pair of sounds at a time and asks, "Were those two sounds alike?" At other times, the teacher asks, "Were those two sounds different?" The child may also say what objects make the sounds.

CULMINATING ACTIVITY

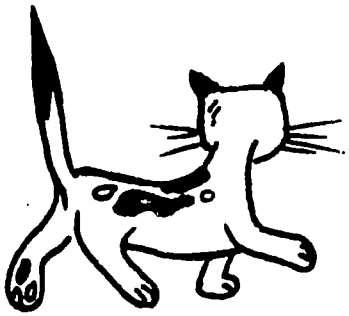
Story with sounds.
Example: Tape record the sound of footsteps growing louder, then the sound of knocking on a door, the sound of a dog barking, then the sound of other footsteps and the door opening and closing followed by heavy and light footsteps in a room. No verbalization is used. The teacher asks, "Who can tell what is happening?" The children may also act out the sound story.

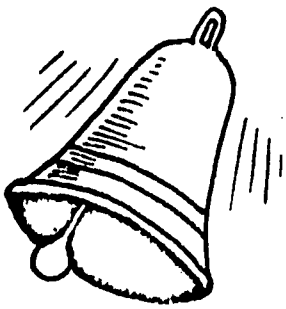
A WORD OF CAUTION: The teacher must be sure that the children are not handicapped by a severe physical hearing impairment.

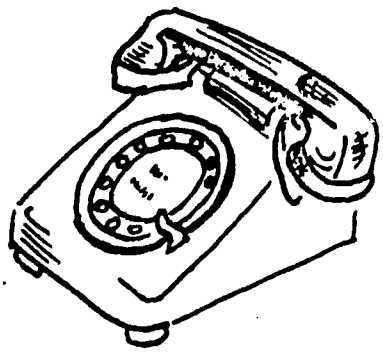
TRANSITION

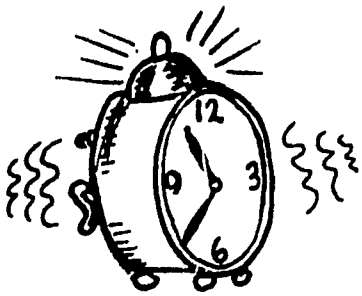
From this primitive level of gross sounds the child should be able to move to the more sophisticated task of learning the sounds of English.

S A M P L E









AUDITORY DISCRIMINATION

Objectives:

1. to assist the child in learning to differentiate between nonsense syllables
2. to be able to differentiate between isolated sounds
3. to be able to differentiate between whole words

The following sets of sounds may either be given directly by the teacher to the child or put on a tape and used with the ear phones. Do the first two with the child.

1. Nonsense syllables:

(Teacher: If these sounds are the same, circle "yes"; if these sounds are different, circle "no")

Set #1

1. boo ----- boo
2. biz ----- breek
3. taz ----- taz
4. mtz ----- bab
5. wim ----- mof
6. ing ----- mig
7. lob ----- lob
8. cus ----- sab

Set #2

1. vilfo ----- vilfo
2. ort ----- orf
3. zla ----- zla
4. rel ----- rab
5. chim ----- cher
6. chom ----- fim
7. brub ----- brub
8. eck ----- ick

Set #3

1. drom ----- drom
2. brub ----- ftz
3. mft ----- mft
4. sweez----- sweez
5. glup ----- glip
6. ostis----- ostis
7. eck ----- ack
8. scrill---- scrid

Set #4

1. plill ----- plill
2. sweem ----- meez
3. whab ----- mab
4. arps ----- arps
5. grat ----- grat
6. swooz ----- zoows
7. sidab ----- dabis
8. tion ----- tion

2. Isolated sounds:

Set #1

1. auh ----- auh
2. uh ----- grrr
3. mmm ----- sss
4. vvv ----- vvv
5. lll ----- lll
6. ksss ----- buh
7. nnn ----- puh
8. err ----- err

Set #2

1. sss ----- wuh
2. fff ----- sss
3. tuh ----- buh
4. kuh ----- kuh
5. thh ----- err
6. buh ----- ahh
7. shh ----- ch
8. nnn ----- nnn

Set #3

1. fff ----- lll
2. shh ----- nnn
3. baa ----- baa
4. wuh ----- prr
5. grr ----- grr
6. aaa ----- kuh
7. tuh ----- tuh
8. kuh ----- guh

Set #4

1. cll ----- crr
2. thh ----- thh
3. whh ----- grr
4. nnn ----- shh
5. sss ----- slll
6. err ----- err
7. buh ----- puh
8. fuh ----- lll

3. Whole words:

If the sets of words are the same, have the child circle "yes"; if different, circle "no". It is important for the teacher to keep an even rhythm allowing about 3 seconds after each row. As the child progresses, allow only 2 seconds. Be careful not to drop your voice at the end of the row.

Set #1

1. house - house - house
2. house - ball - house
3. hat - shoe - hat
4. car - car - car
5. car - bus - car
6. pie - pie - pie
7. toe - toe - toe
8. bell - soap - bell

Set #2

1. cost - coat - cost
2. cat - mat - cat
3. coin - coin - coin
4. key - see - key
5. cap - nap - cap
6. cart - cart - cart
7. coat - oat - coat
8. dish - wish - dish

Set #3

1. jack - sack - jack
2. jail - pail - jail
3. jet - jet - jet
4. jug - mug - jug
5. jar - jar - jar
6. lace - lace - lace
7. whip - sip - whip
8. pen - wren - pen

Set #4

1. nut - cut - nut
2. nose - toes - nose
3. knot - knot - knot
4. nail - nail - nail
5. leaf - beef - leaf
6. net - bet - net
7. purse - purse - purse
8. pear - fair - pair

Whole words (continued)

Set #5

1. thin - pin - thin
2. thorn - worn - thorn
3. thief - thief - thief
4. thumb - numb - thumb
5. thong - thong - thong
6. shark - mark - shark
7. shell - shell - shell
8. ship - ship - ship

Set #6

1. shed - head - shed
2. cab - cash - cab
3. knob - knob - knob
4. bib - bill - bib
5. crab - crab - crab
6. knob - knock - knob
7. cab - cab - cab
8. sack - sash - sack

Set #7

1. stream - stream - stream
2. stripe - tripe - stripe
3. strap - scrap - scrap
4. string - string - string
5. stream - steam - stream
6. stripe - stripe - stripe
7. badge - batch - badge
8. ram - rap - ram

Set #8

1. gold - gold - gold
2. elf - elk - elf
3. child - child - child
4. gold - goal - gold
5. child - chide - child
6. elf - elf - elf
7. lamp - lamp - lamp
8. pump - pup - pump

Set #9

1. jump - jump - jump
2. camp - can't - camp
3. lamp - lamb - lamp
4. pump - pump - pump
5. gum - gun - gum
6. mouth - mouse - mouth
7. tooth - tooth - tooth
8. wing - wing - wing

Set #10

1. tack - task - tack
2. tusk - tusk - tusk
3. mask - mass - mask
4. flask - flax - flask
5. tasks - tux - tusks
6. coat - coat - coat
7. mice - mouse - mice
8. tacks - tasks - tacks

AUDITORY DECODING

Objectives: Develop the ability to respond to spoken words.

A. Learn to follow simple verbal instructions

1. Simple directions: Open door; walk around room; find arithmetic book on second shelf; put your hand on head and skip to the desk and back; turn off lights; walk to the door, etc.

   When successful, combine into two-step directions: Hop to the door and turn off the lights. Gradually increase number of steps in directions. Then have the child describe verbally what he has done after completing series of tasks.

2. Action records: Play rhythm and activity records such as "Dance a Story" and teach children to carry out directions.

3. Book exercises: Locate p. 320, show me third paragraph on this page. Point out first word on last paragraph on page 1.

4. Drawing and marking exercises: Special ditto worksheet and record instructions for listening post use, e.g., mark first circle in top row, etc.

5. Sock-it-to-me time: Children take crayon and draw picture of themselves on sheet of paper. When done, listen to pairs of words teacher says and pick out one she makes a mistake on. If they succeed, allow to make black mark across drawing. Teacher says: "Here is part of my hand-thumb-fun. Which one was right? Yes, first time I said it was right. There is part of my face-chin-shin. Yes, Mary, that is right. You get to draw a mark."

B. Respond by gestures to auditory stimuli

1. Clues: Arrange assorted objects or pictures on table. Teacher says: "What is big, round, and bounces?" "What is small, long, sharp?" Child points out object.

2. Charades: Children divide into teams and select names of books, movies, events (Pinocchio, Mary Poppins, Halloween, etc.) to act out for other side to guess. Show how to open door, cut with knife, sweep floor, etc.

3. Symbol association: Arrange mixed letters, numbers, simple words in chalk tray. Teacher says "a", "I", "cat", etc. and child points out symbol. "Show me a letter that comes before N. Give me a number that comes after 14." Use phonetic records and formal phonic training program.

C. Respond by word to auditory stimuli

1. Yes or no or nod head to respond. Verbs: Do birds crawl? Do cars move? Do worms walk? Sex: Is a man a boy? Are girls females? Is John a woman? Purpose: Are crayons to color? Are chairs to fly? Is food to eat? Are bicycles to ride? Are pencils to paint? Are shoes to wear?

2. True or false response: Read a story or textbook assignment aloud. Prepare series of true-false questions to be presented in spell-down fashion.

Tapes may be used and children may have earphones and respond on ditto sheets.

AUDITORY VOCAL ASSOCIATION

Specific Objective: To develop the ability to complete a sentence.

(Exercises and examples given here are not necessarily the complete range of material to be used, but merely included for illustration purposes.)

I. Give simple sentences with an obvious word missing. The teacher presents the partial sentence orally and encourages the child to respond.

My name is _____.
I sleep in a _____.
My dog can _____.
Daddy works and _____.

II. This exercise may be taped or given orally. These responses require more thought.

A fire feels _____.
The wind is _____.
The whistle sounds _____.
A kitten feels _____.

III. Follow the Leader Game

The teacher may be the leader. The teacher gives a sentence related to normal activities of the child. The child repeats and substitutes the word of his choice for the final word in the given sentence.

I like ice cream.	The child may say, "I like candy."
The dog ran.	The dog played.
I run to Mother	I run to Daddy.

IV. Provide materials so the child may engage in an activity. Use the same sentence varying the noun or subject. Vary activity as needed.

Give the child a paper and crayon supply. As he uses these, ask him to tell what he is doing. Encourage a simple sentence response, such as, "I am coloring." Who else may color? Encourage use of other subjects with the same activity as the predicate.

V. Repeating sentences. Ask the child to repeat a sentence by beginning with filling in one word and then progressing to the complete.

My daddy plays ball.
My daddy plays ____.
My daddy _____ ____.
My _____ _____ ____.
__ _____ _____ ____.

VI. Show pictures (cut from magazines, drawn, etc.) of action. Encourage the child to tell about the picture in simple sentence.

The girl runs.

VII. I'm Thinking Game

Give the child oral clues about an object in the room. He is encouraged to identify the object orally in a full sentence.

Example: It is white.
It is on the table.
I write on it.
What is it? or, I'm thinking of _____.
Response may be: "It is paper".

VIII. Primary game for verbal fluency - sentence.

Materials:
small plastic objects from toy store. (plane, car, doll, ball, boat, etc.)

Place several objects where the child may see them. As the child identifies the item in the display by using a full sentence, he may put the object on his desk.

Possible responses: I want the car.
I see a car.
The car is blue.
I like the car.

AUDITORY DECODING - Following Commands

Basic Goal: To aid the child in developing his ability to understand and interpret oral directions.

Specific Objectives:

1. To follow simple instructions or commands
2. To interpret and indicate by gesture the meaning or purpose of auditory stimuli
3. To interpret verbal stimuli by simple yes and no response
4. To interpret verbal stimuli with a graphic (paper, pencil or crayon) response

Final Evaluation: Child is able to retain and recall general auditory directions for a reasonable length of time.

Rationale: Children with specific learning disabilities in acquiring and using information or skills that are essential to problem solving will be in this class. The ability to hear and interpret, or understand, a command is essential to progress in the classroom since much of our daily program is verbal. The following program attempts to identify each step in the development of the child and to follow a sequence. Each task is presented, reinforced, and is then incorporated in the next step. Each step should use a reward system as an aid to insuring success in learning.

The following are examples of a program to develop the ability to follow directions when heard. These exercises were developed to be taped.

Before the child is placed in front of the tape recorder, it is necessary to take a little time to see if the child knows his colors. Sit with the child and a box of colored blocks. Ask the child to hand you a colored block. "Hand me a red block." "Hand me a blue block." etc. Then ask the child to find a red block and place the red block in a box which you have in front of you. After you feel he understands what is required of him place him in front of the tape recorder.

On the tape recorder:

1. First day: In front of you is a box of colored blocks. Find a red block. Find a blue block. Find a yellow block. Now place them on the table in front of you the red block, the blue block and the yellow block. Stop the tape recorder and come to me.
2. Second day: In front of you is a box of colored blocks and a box, a basket, and a dish. Now find a red block and put a red block in the box. Put a blue block in the basket. Put a yellow block in the dish. Stop the tape recorder and bring the box, the basket, and the dish to me.

by
Florence Bergman
Virginia Gross

3. Third day: In front of you is a box of colored blocks and a box, a basket, and a dish. Find a red and blue block and put in the box. Find a blue and yellow block and put in the basket. Find a red and yellow block and put in the dish. Stop the tape recorder and bring the box, the basket, and the dish to me.

4. Fourth day: In front of you on the table are three pieces of paper. At the top of the paper is a number. Look for the paper with number one at the top. Draw a tree on the paper. Stop the tape recorder. Now find the paper with number 2 at the top of the paper. Draw a purple tree on the paper. Stop the tape recorder. Did you draw the purple tree? Find the paper with number 3 at the top. Draw a purple and brown tree on the paper. Stop the tape recorder.

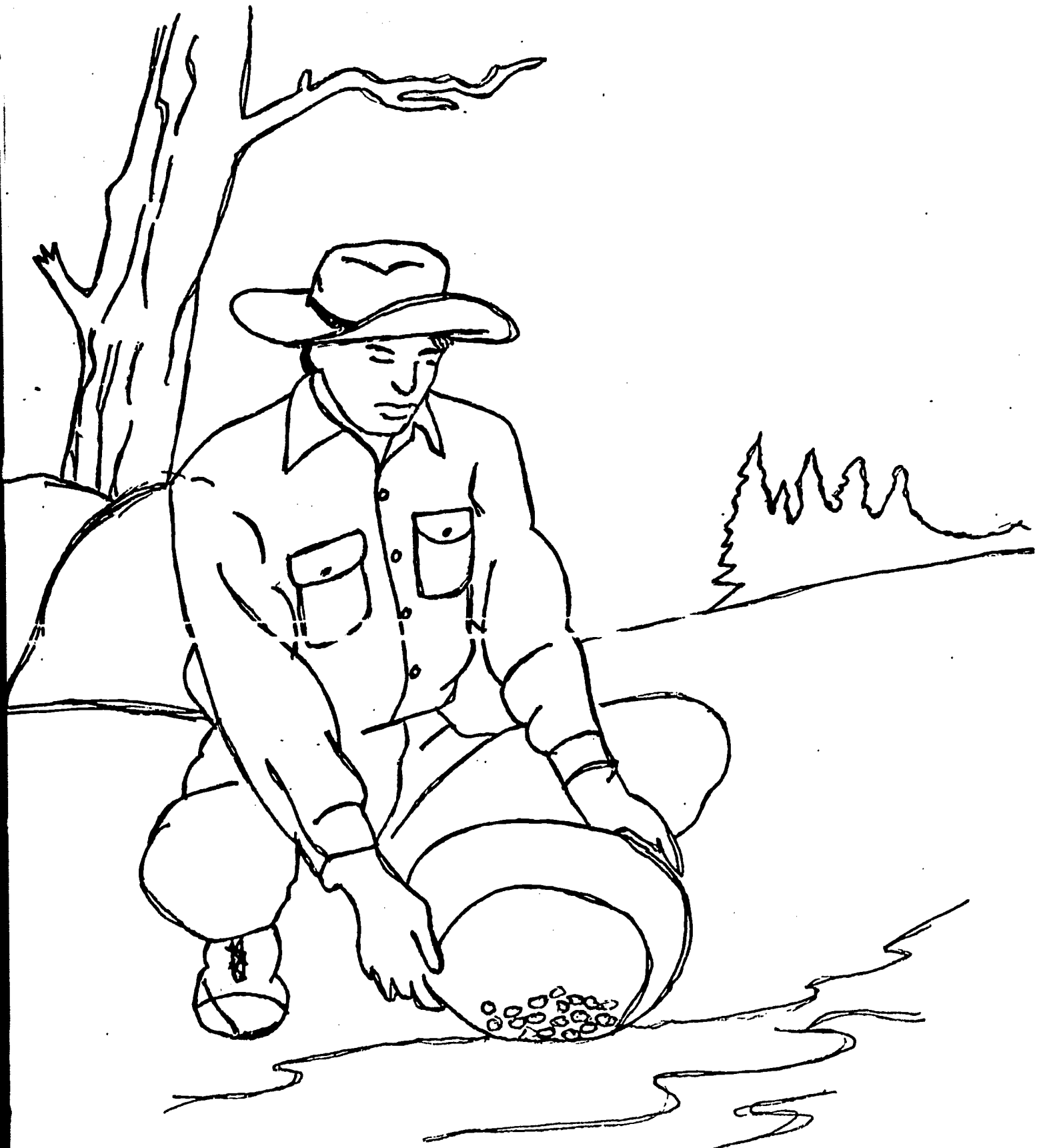
Assumptions: The following is Stage II in a continuing program. The children have previously mastered materials involving one and two part commands.

The following directions will be placed on tape so the teacher is free to work elsewhere in the room. Give the child the picture of the miner.

On the tape recorder:

Look at the picture in front of you. Be sure you have a pencil and a box of crayons. If you need to go get your crayons or pencil, turn the tape recorder off and go for them.

Now we are ready. Let's color the picture of the miner together.
Turn off the tape recorder each time you color.
Find your brown crayon. Color the man's hat brown.
Did you color the hat brown?
Find the trunk of the big tree. Color it brown too.
Did you make the tree trunk brown?
Find your blue crayon. Color the man's shirt blue.
Does the man have a blue shirt?
Find your black crayon. Color his pants black.
Are the pants black?
Find your green crayon. Color the trees on the right hand side of your paper green.
Did you make the little trees green?
Find your yellow crayon. Color the pan yellow.
Is the pan yellow?
Find the orange crayon. Make the gold in the pan orange.
Did you make the gold orange?
Now you may finish the picture using any crayons you choose.
When you are finished, raise your hand so your teacher may check your paper.
Now turn the tape recorder off and finish your picture.



Panning for Gold

Section B

VISUAL PERCEPTION

Ninety percent of the information we receive through our senses comes through vision. The ability to perceive the letters of the alphabet, for instance, is not an inborn quality, but rather a developmental, learned attribute. When some problem exists, not in the area of vision, but in the realm of understanding and associating the viewed symbol, and making sense out of a set of straight and curved lines, then there is a visual perceptual problem. Seldom do we find a child who can not see the symbols, more often we find one who can not make sense out of these symbols he does see.

This section gives practice in various fields of using the information provided by the eyes.

Example a - pages 25 - 26
Figure-ground exercises with numbers

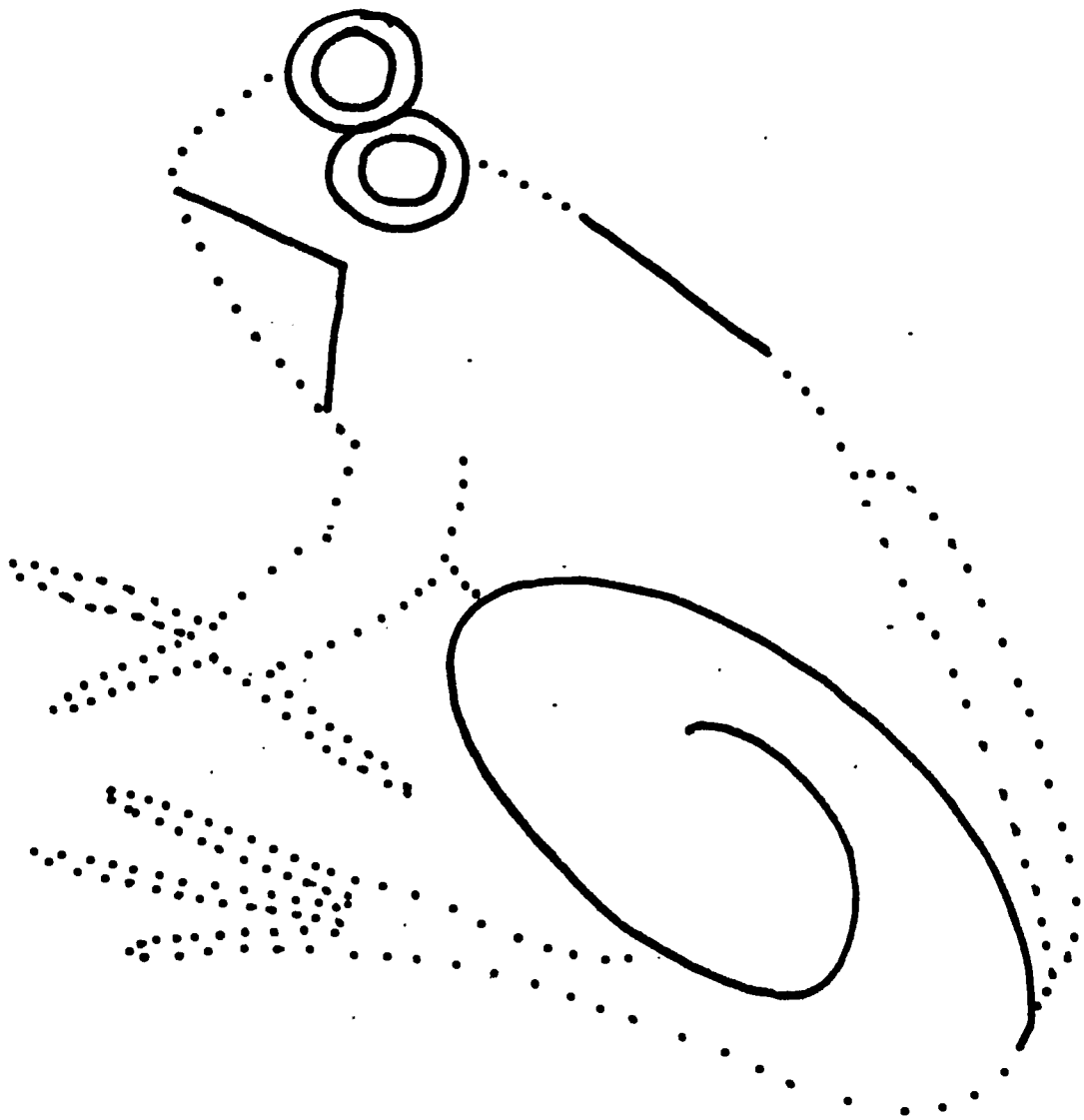
Example b - pages 27 - 31
Pictomorphs - words shaped like what they describe

Example c - page 32
Figures in space

Example d - pages 33 - 40
Ability to choose similar shapes - Form constancy

Example e - pages 41 - 46
Association of shape and location

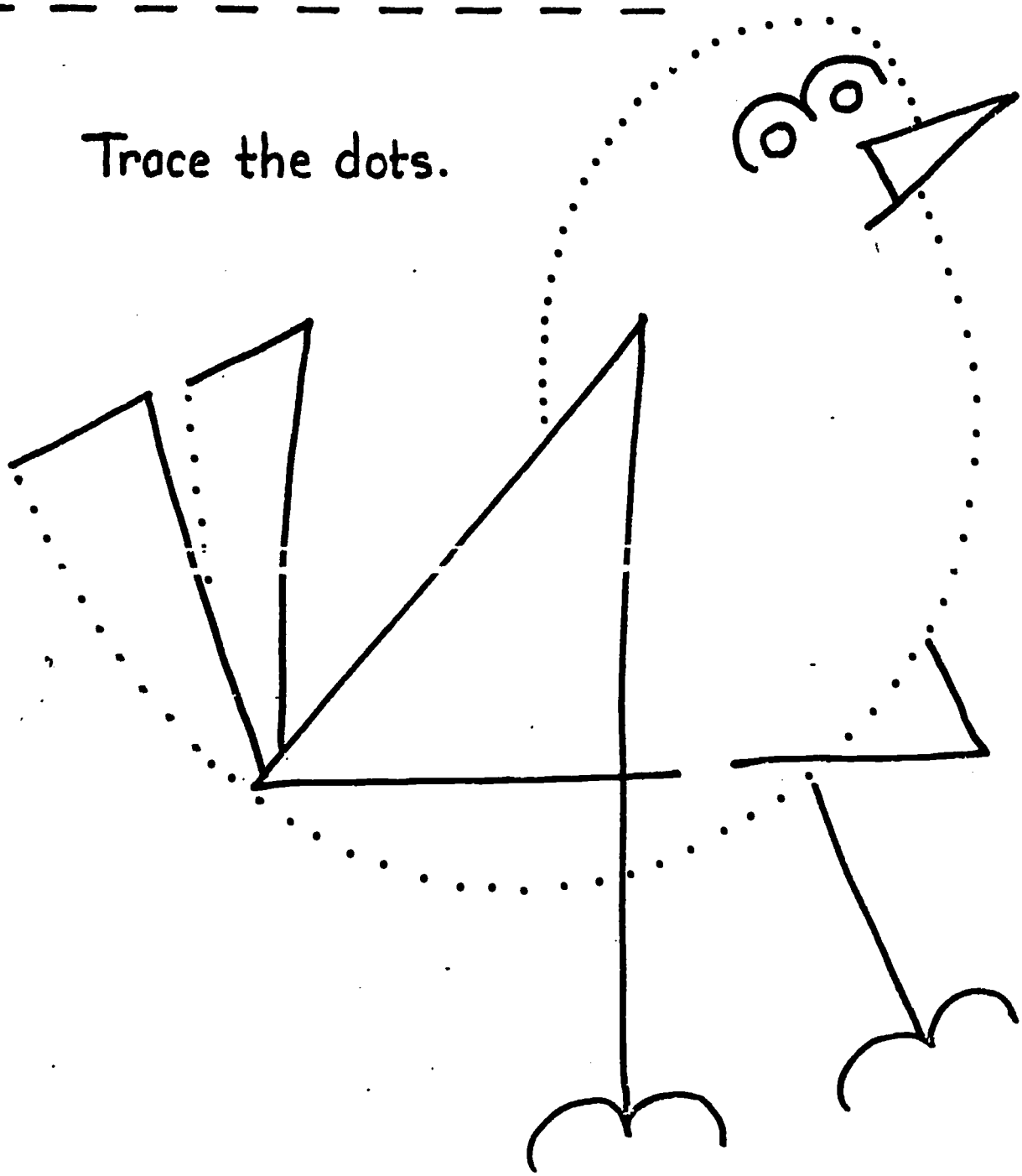
Trace the dots!



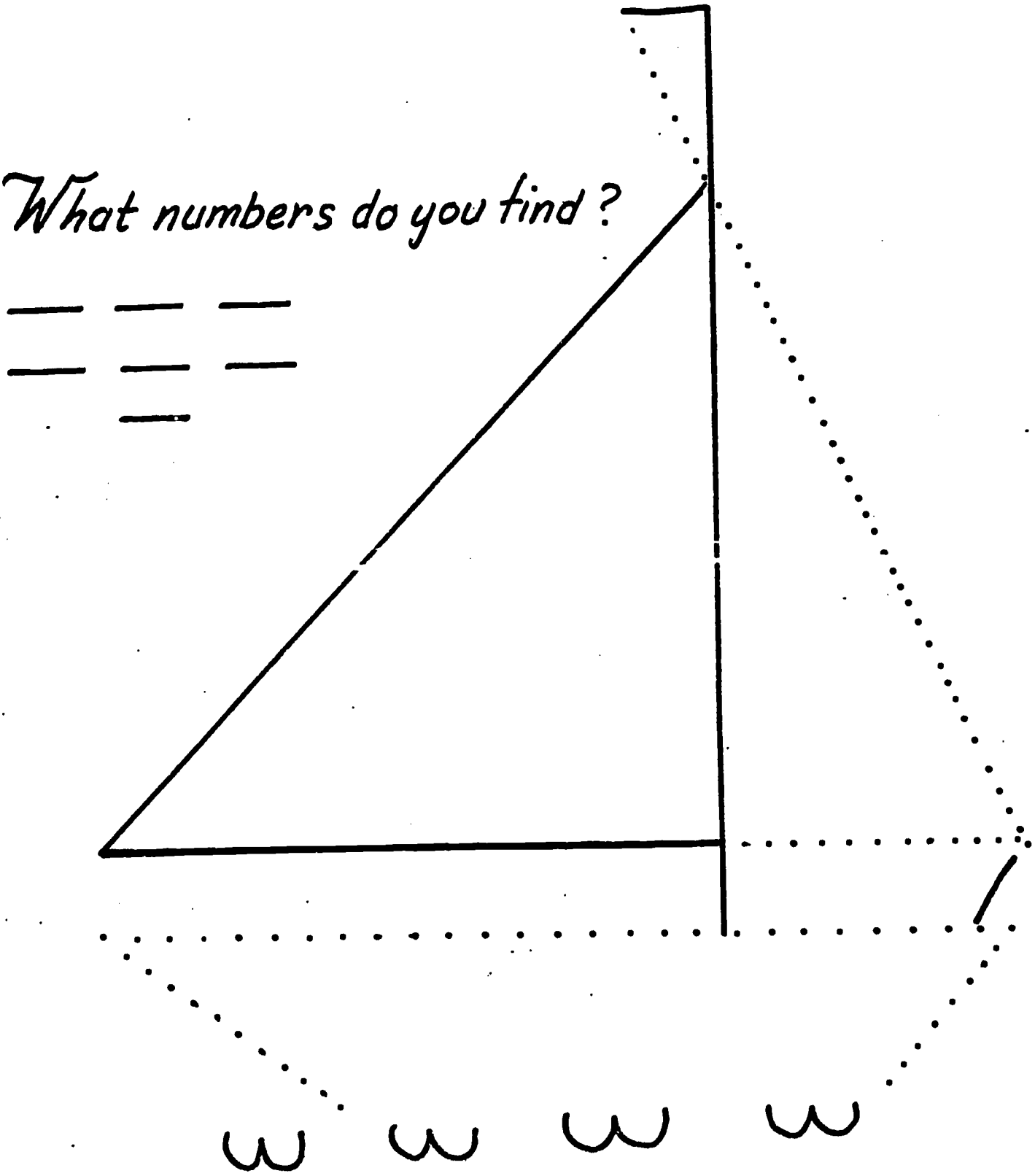
What numbers do you see?

Can you find 9 numbers?

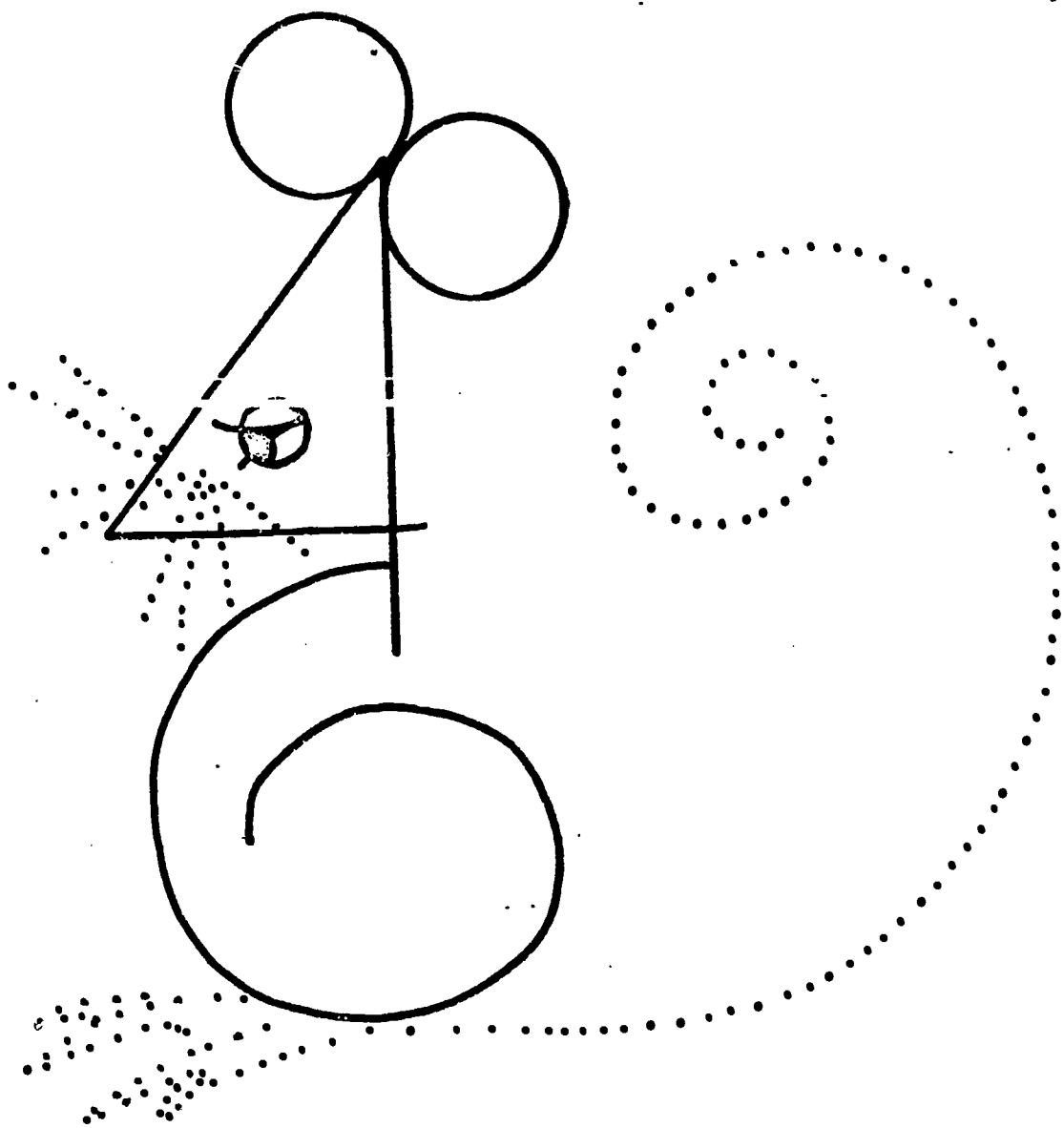
Trace the dots.

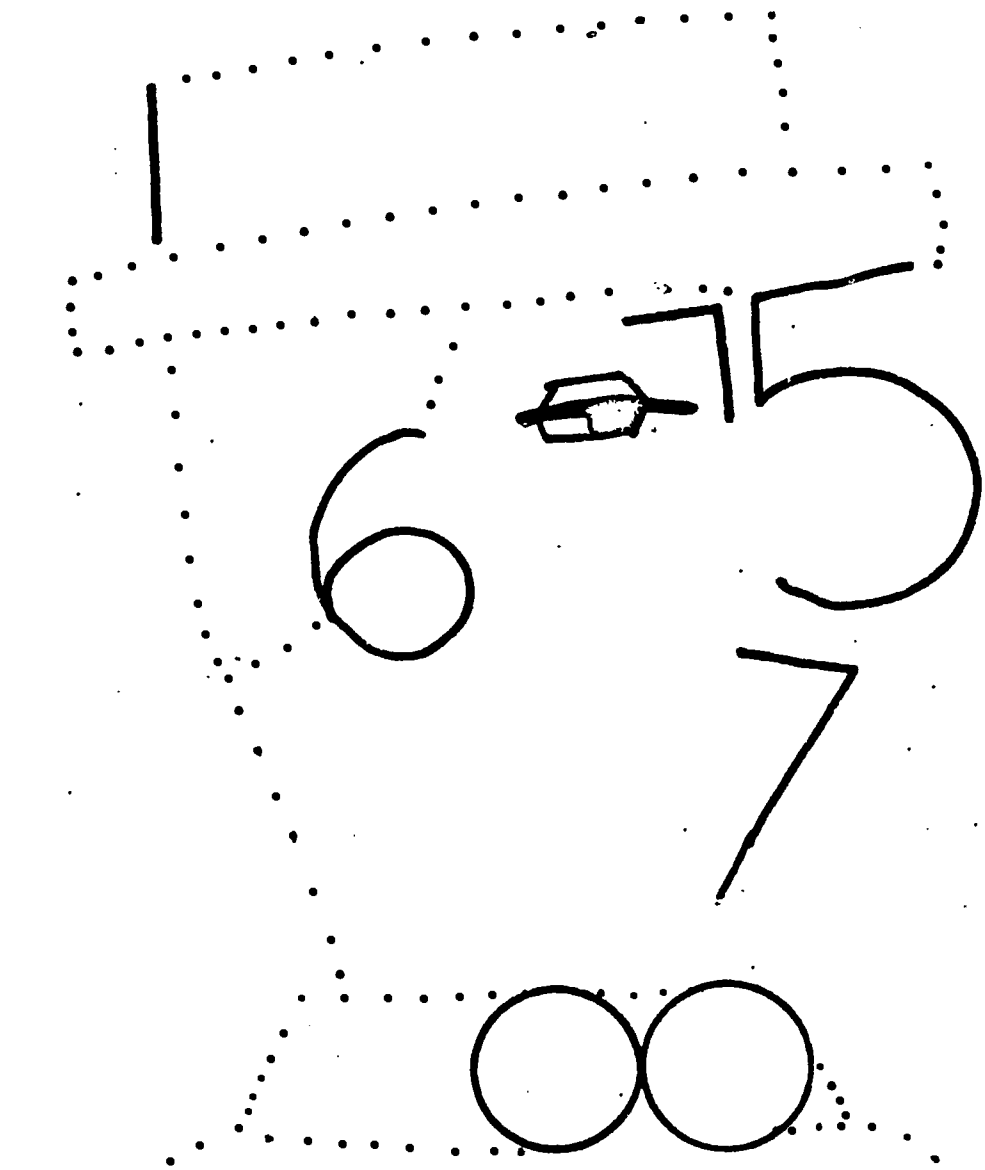


What numbers do you find ?



Trace the dots to see what the 8, 4, and 6 make



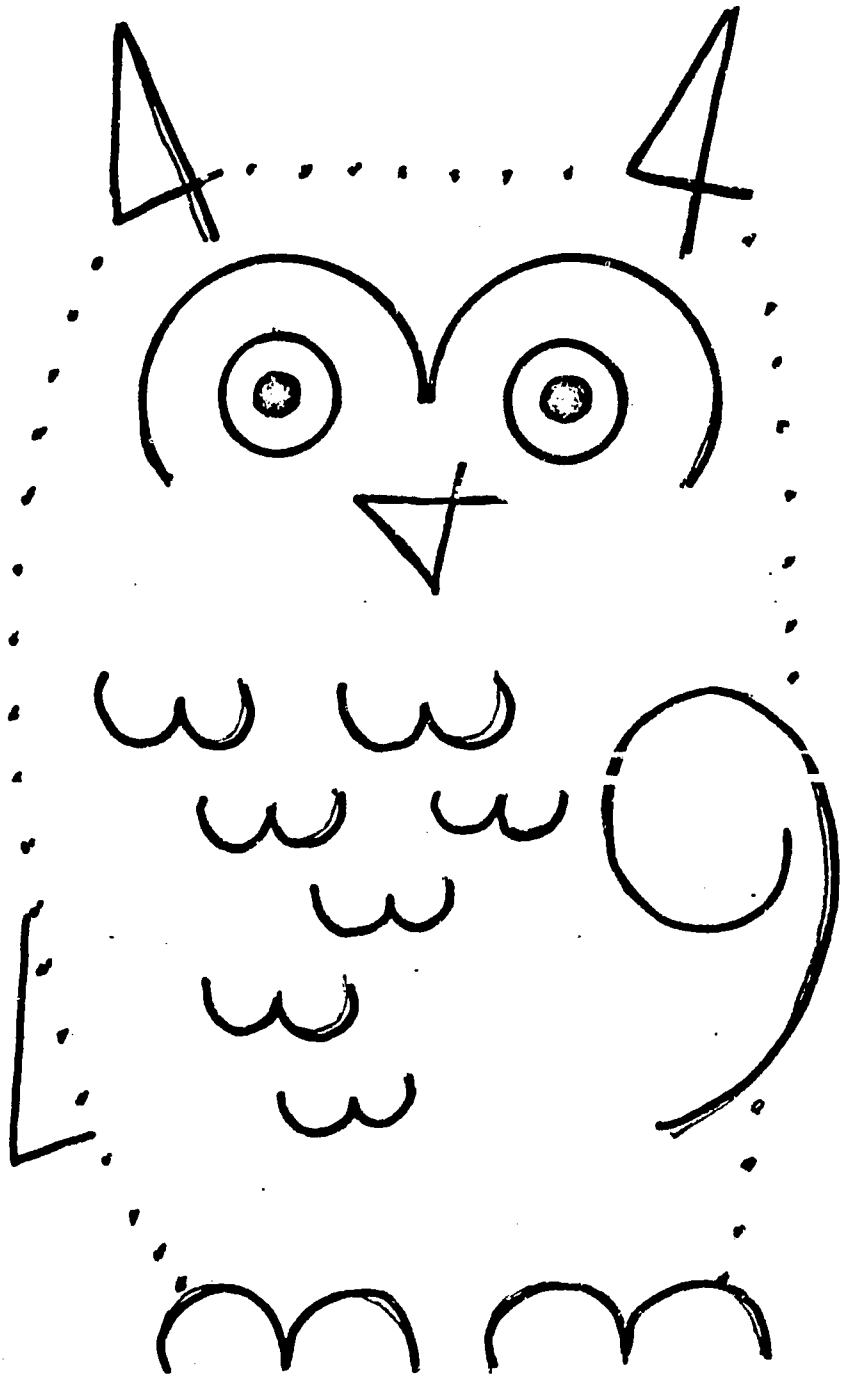


YOUR POP?

__ __ __ __ __ __

Put the numbers here.

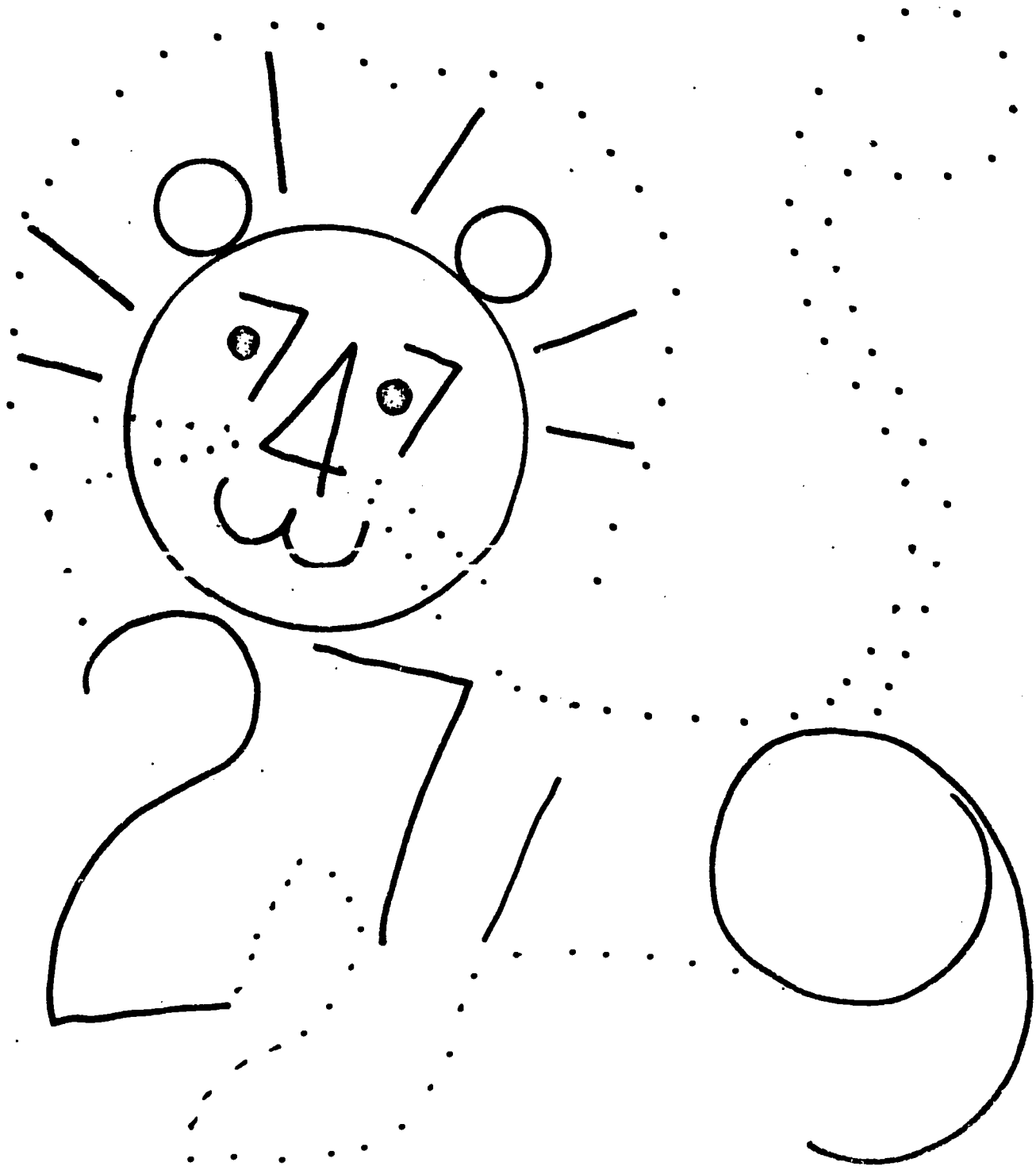
A WISE OLD OWL...



How many 4's are there? ☐
How many 3's ? ☐
What other numbers are there?

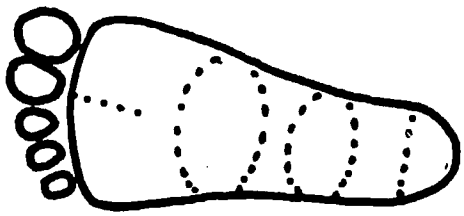
There are ☐ 1's .

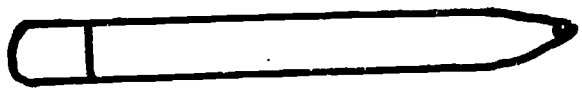
There are ☐ 0's

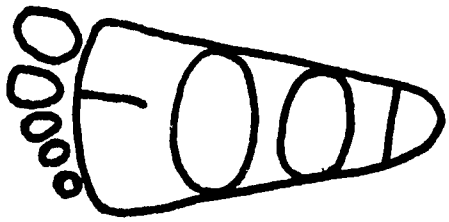


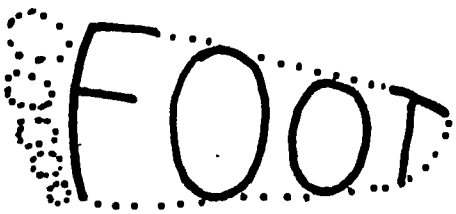
There are ☐ 7's. What other numbers do you see? _____

PICTOMORPHS





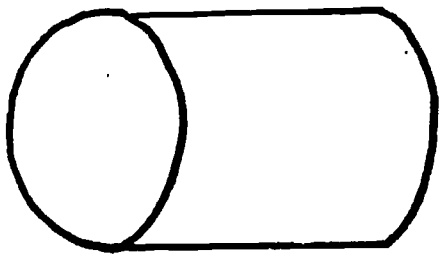


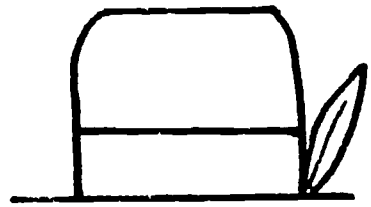


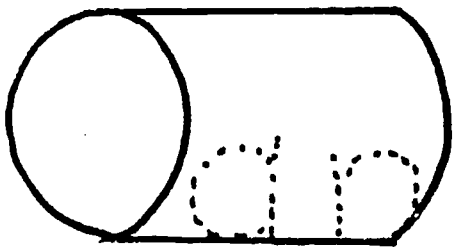
FOOT PENCIL

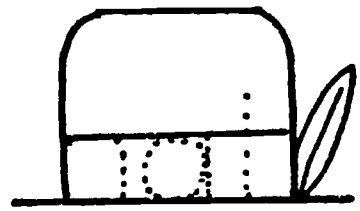
CONCEPT DEVELOPMENT SEQUENCE

by
D.E. Schmalzried



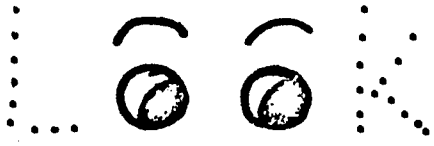






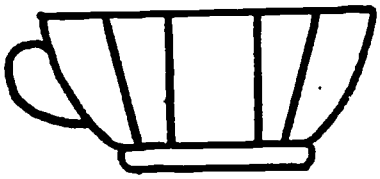
Can hat

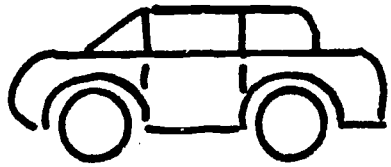
Can hat

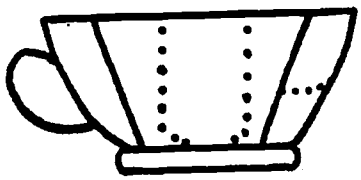


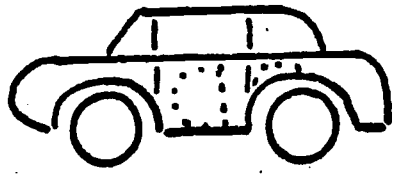
See Look

See Look







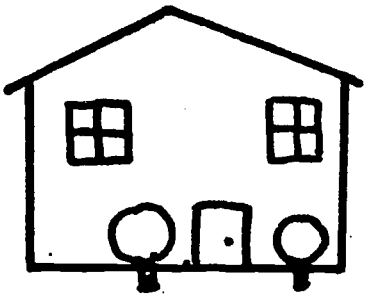


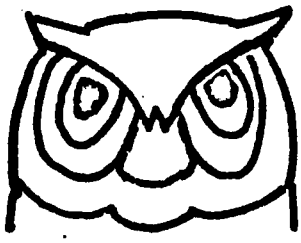
CUP

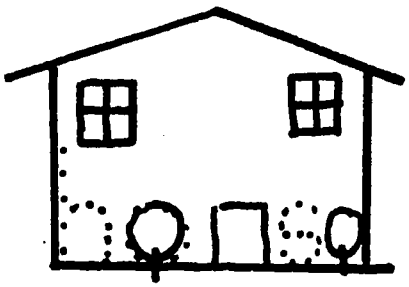
car

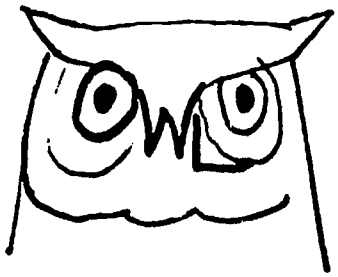
CUP

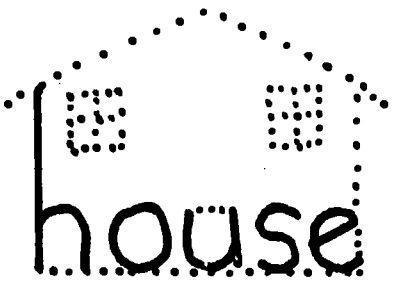
car

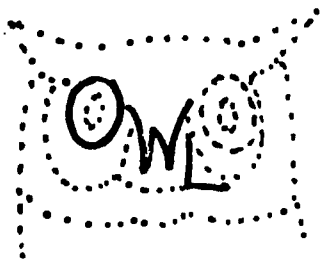












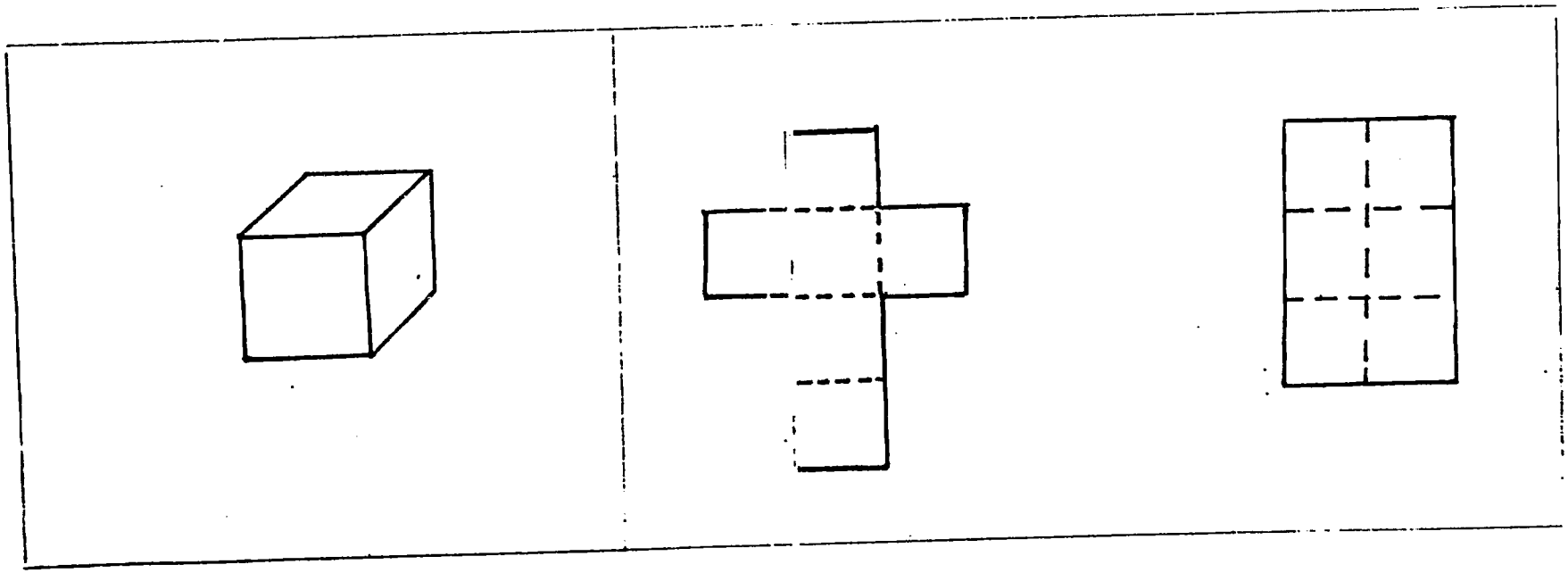
house

OWL

VISUAL-PERCEPTUAL SKILL MERGED WITH REASONING

Instructions to the Teacher

Figures may be provided in foldable shape for motor reinforcement.



Instructions to Pupil

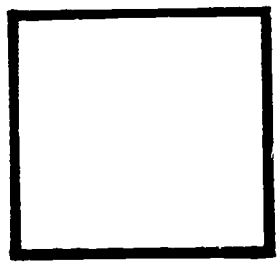
Look carefully at figure at the left. It is folded up like a box. Mark an "X" through the figure at the right which the box will look like if it is unfolded and spread out flat.

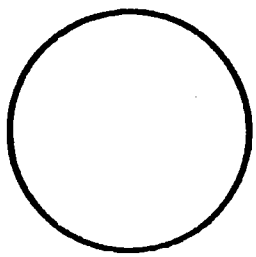
by:
Fred Stumpp

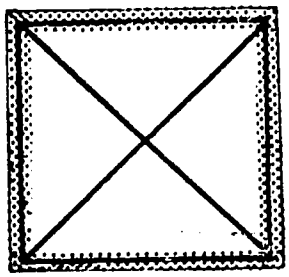
Bc 32

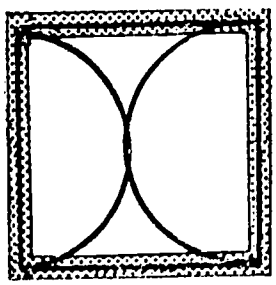
On each of the following pages, outline all examples of the figures shown at the top as was done in the example below.

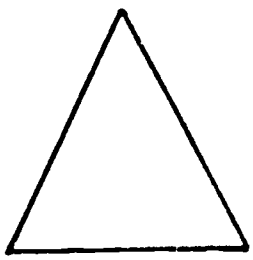
EXAMPLE

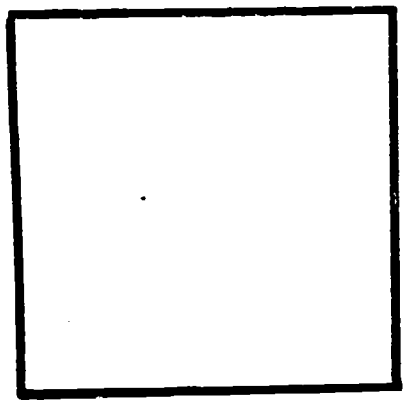


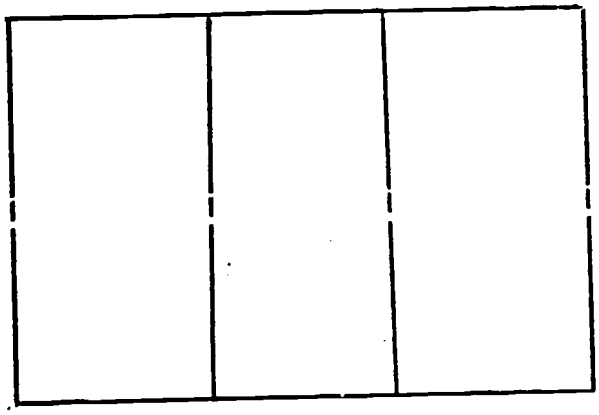


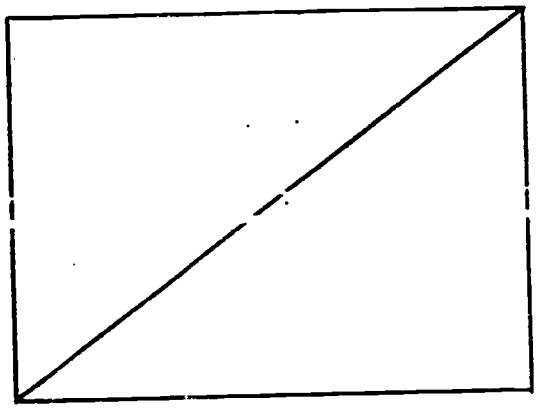


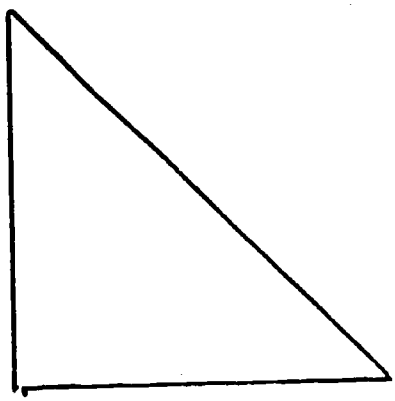


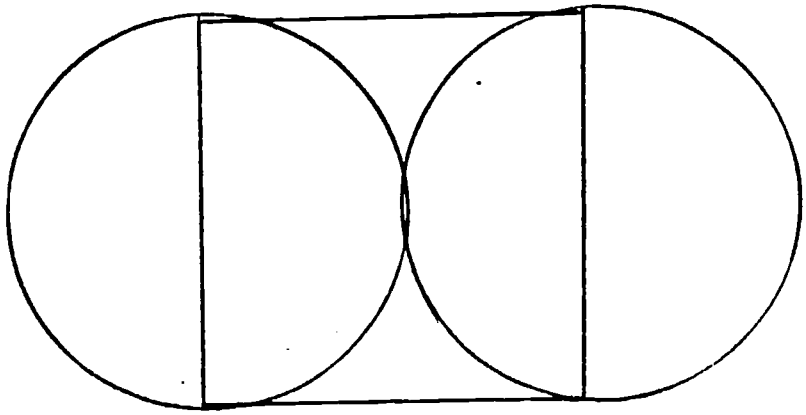


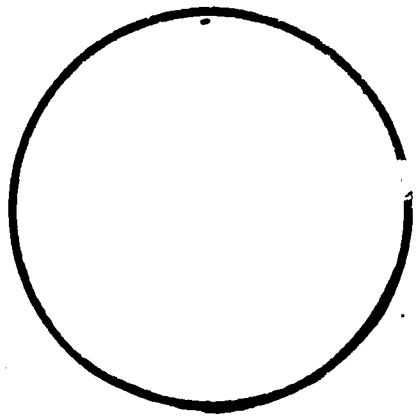


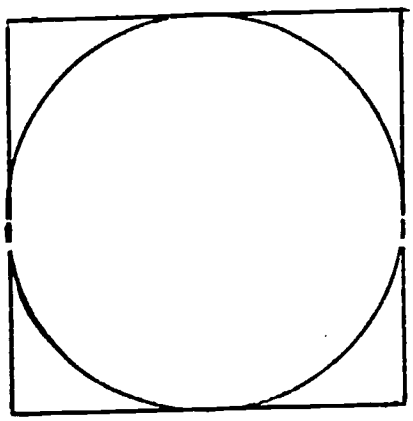


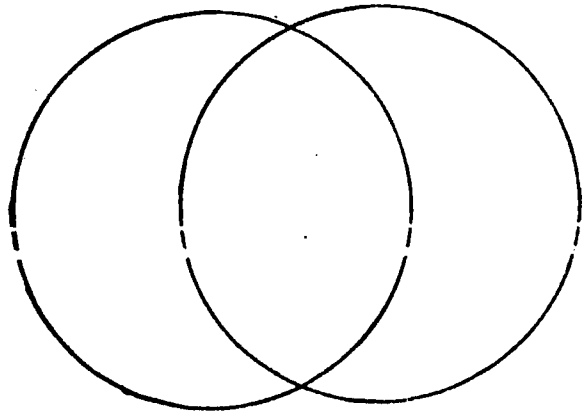


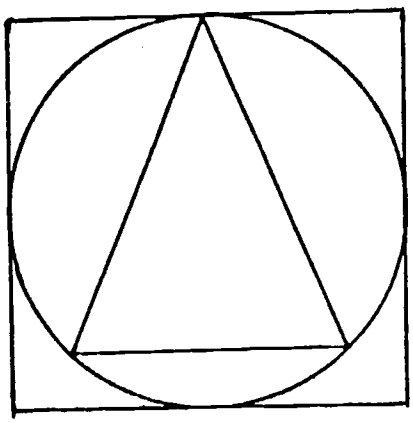


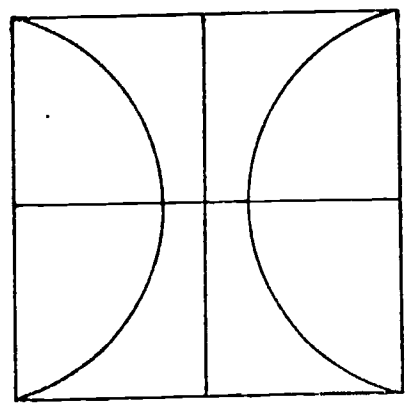


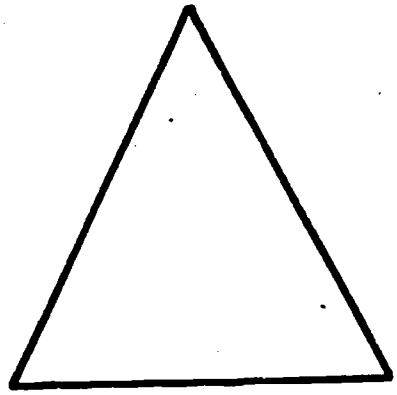


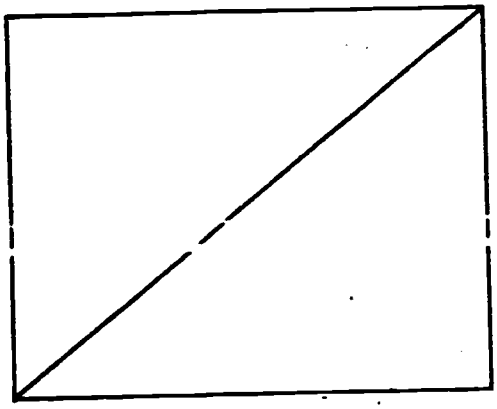


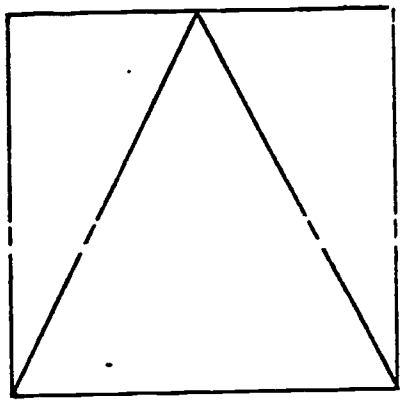


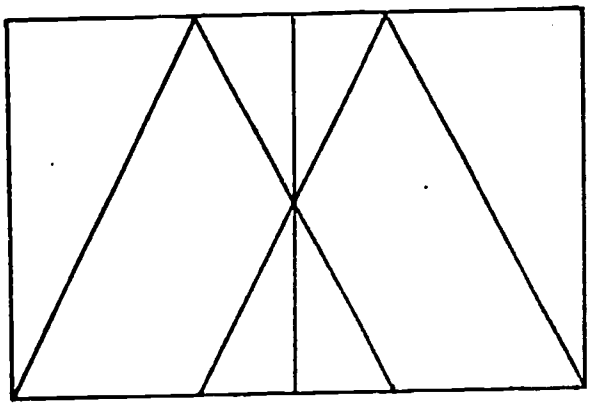


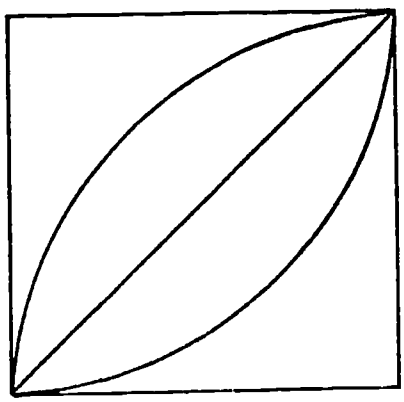


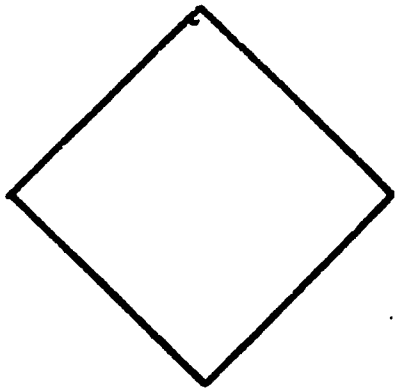


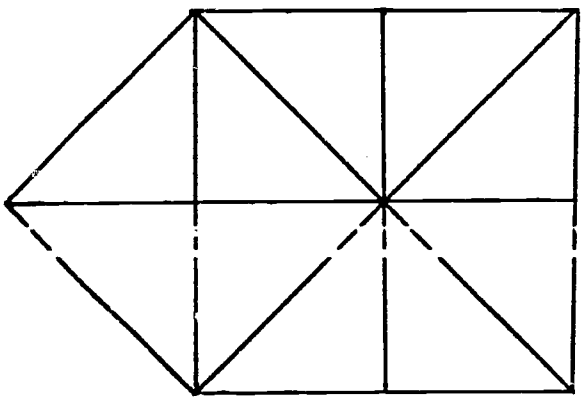


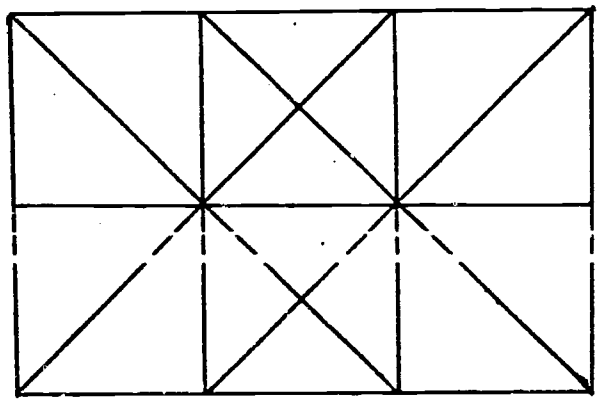


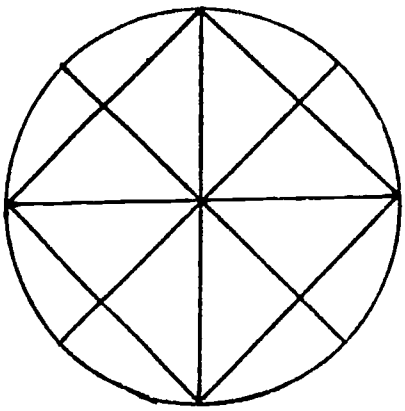


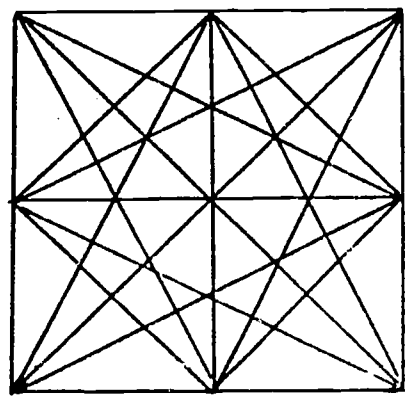


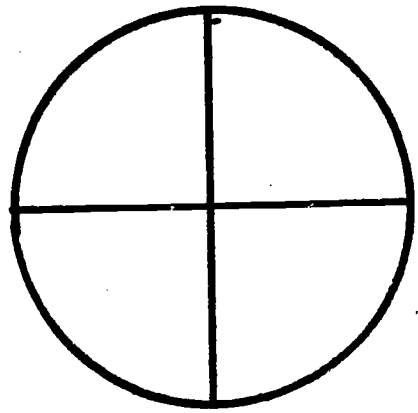


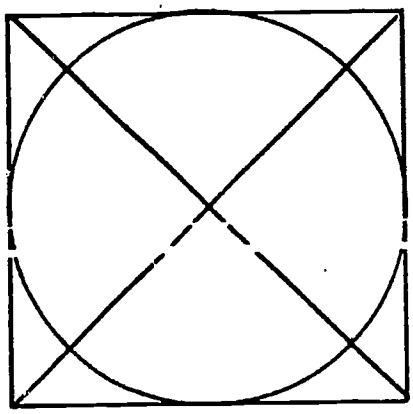


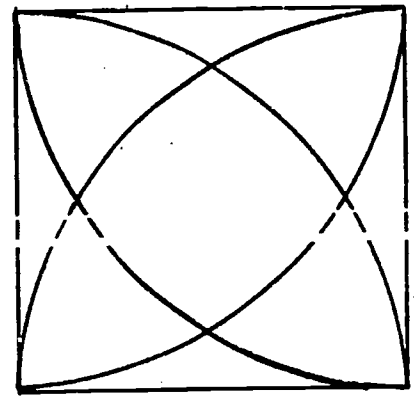


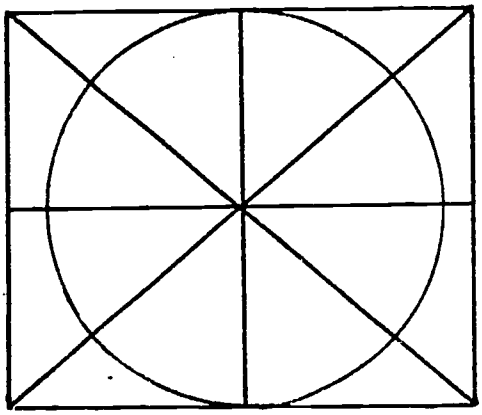


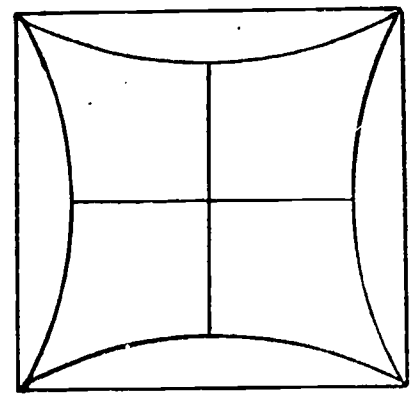


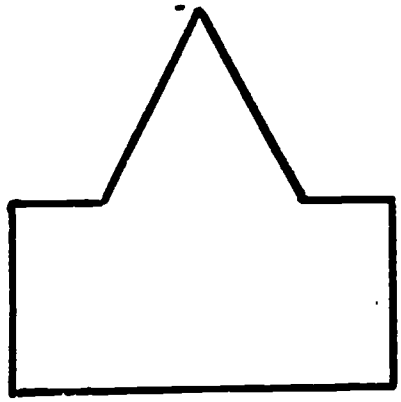


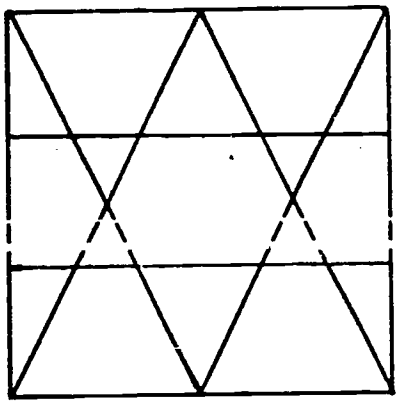


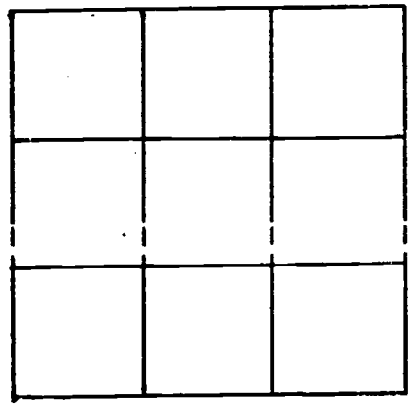


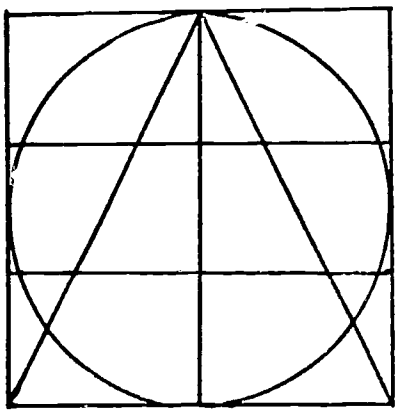


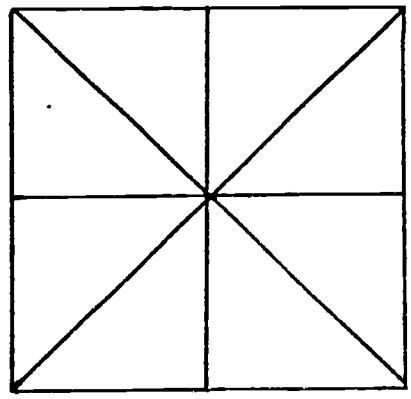


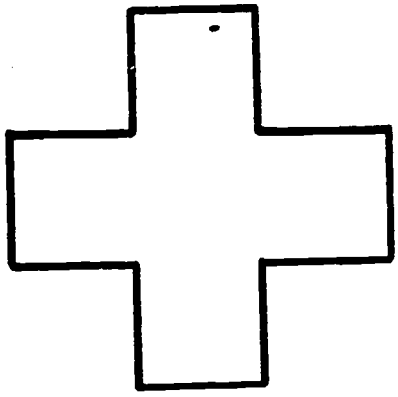


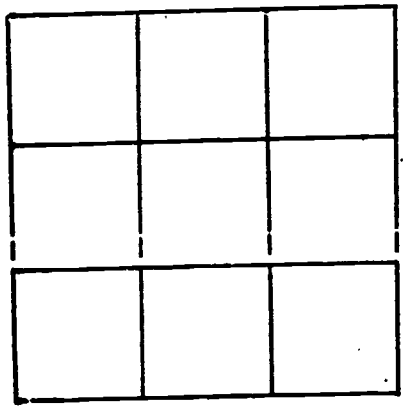


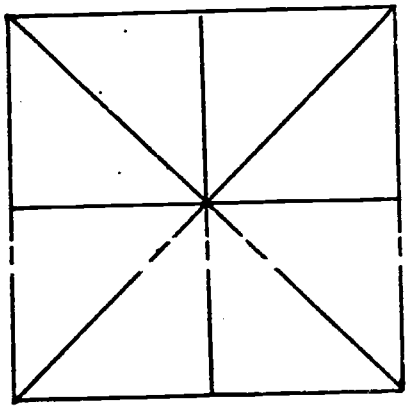


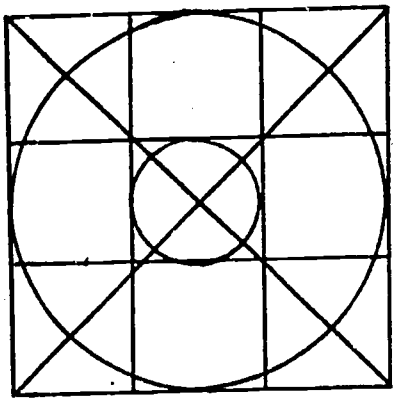


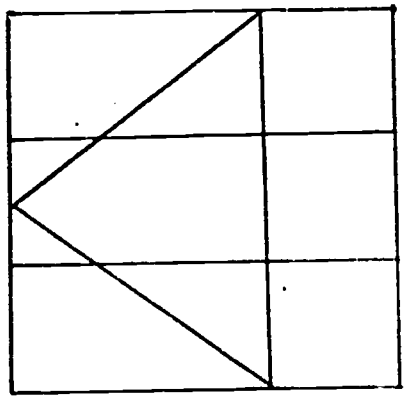








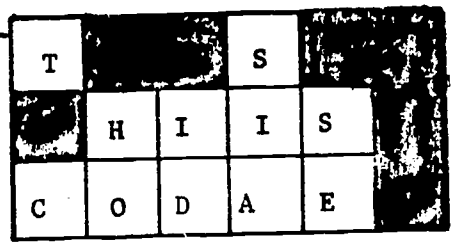




VISUAL - PERCEPTUAL CODING

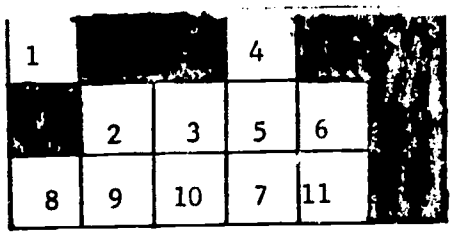
S A M P L E

FIGURE A



FIND THE LETTER IN FIGURE A WHICH IS IN THE SAME SPACE AS THE NUMBER IN FIGURE B AND WRITE IT BELOW.

FIGURE B



T

1 2 3 4 5 6 7 8 9 10 11

by:

Matt Glavich

DECODE THIS STORY

I	A	H		S	A	A	T
F	C	A	C	P		N	R
	H	N	L		R	D	U
E		D	A	W	M		E

1	4	7		14	17	20	23
2	5	8	11	15		21	24
	6	9	12		18	22	25
3		10	13	16	19		26

WOULDN'T IT BE FINE AND DANDY ___ ___ ___ ___ ___ ___

1 2 3 4 5 6

___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___

7 8 9 10 11 12 13 14 15 16 17 18 19

___ ___ ___ ___ ___ ___ ___

20 21 22 23 24 25 26

W	D	E	I	R	R	A	C
I	T	H	I	T	■	T	H
■	S	■	S	A	■	S	I
U	R	■	A	N	C	■	E

8	7	6	5	4	3	2	1
9	10	11	12	13	■	14	15
■	20	■	19	18	■	17	16
21	22	■	23	24	25	■	26

1 2 3 4 5 6 7 8 9 10 11 12 13

14 15 16 17 18 19 20 21 22 23 24 25 26

T	H	I	N	G		G	O
E		A	B	O	U	T	O
M		Y	O	U			D
O	S		W	O	N	K	I

10	11	12	13	14		15	16
9		19	20	21	22	23	17
8		24	25	26			18
7	6		5	4	3	2	1

"

1	2	3	4	5	6	7	8	9	10	11	12	13	14

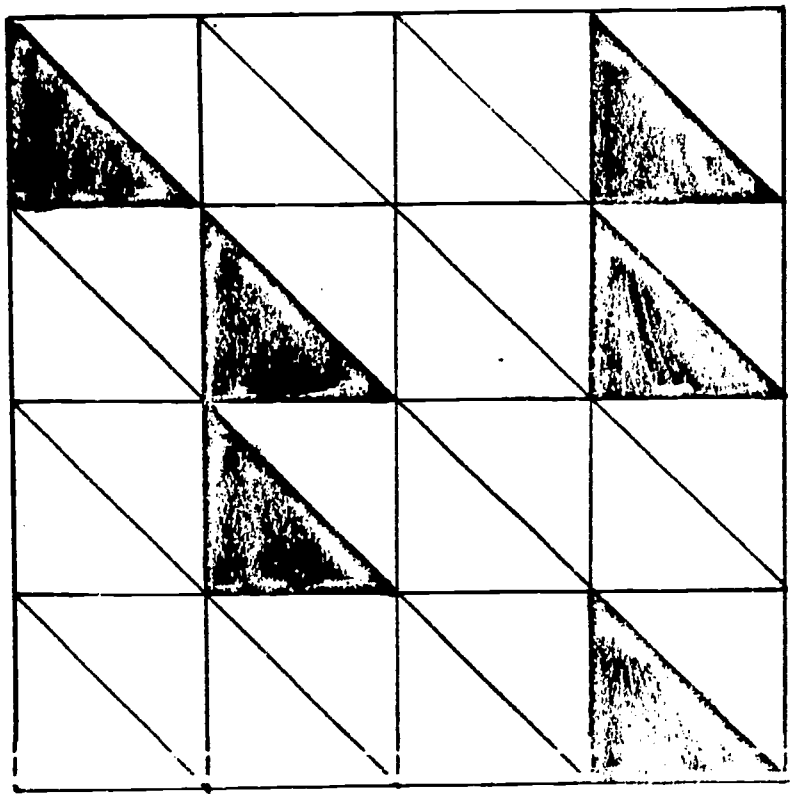
15	16	17	18	19	20	21	22	23	24	25	26

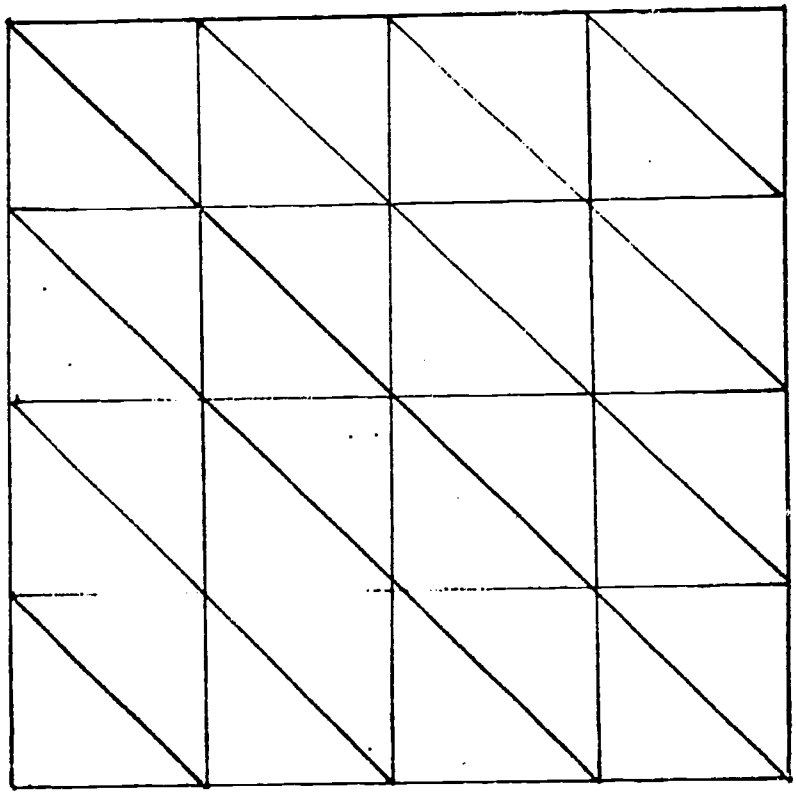
"?

NOW WRITE THE STORY YOU HAVE DECODED

VISUAL PERCEPTION

Draw This Design Below

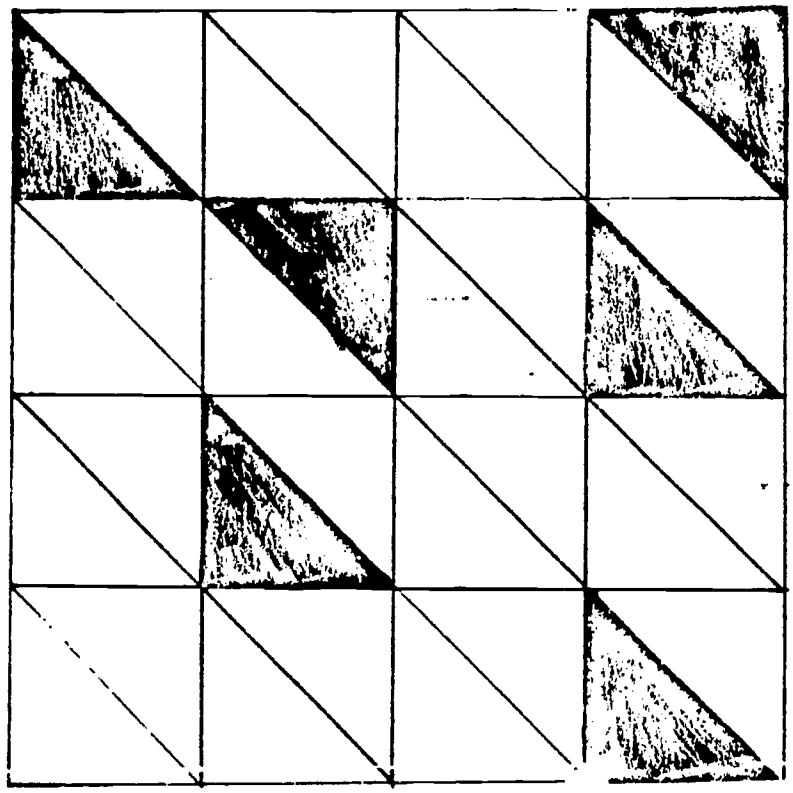


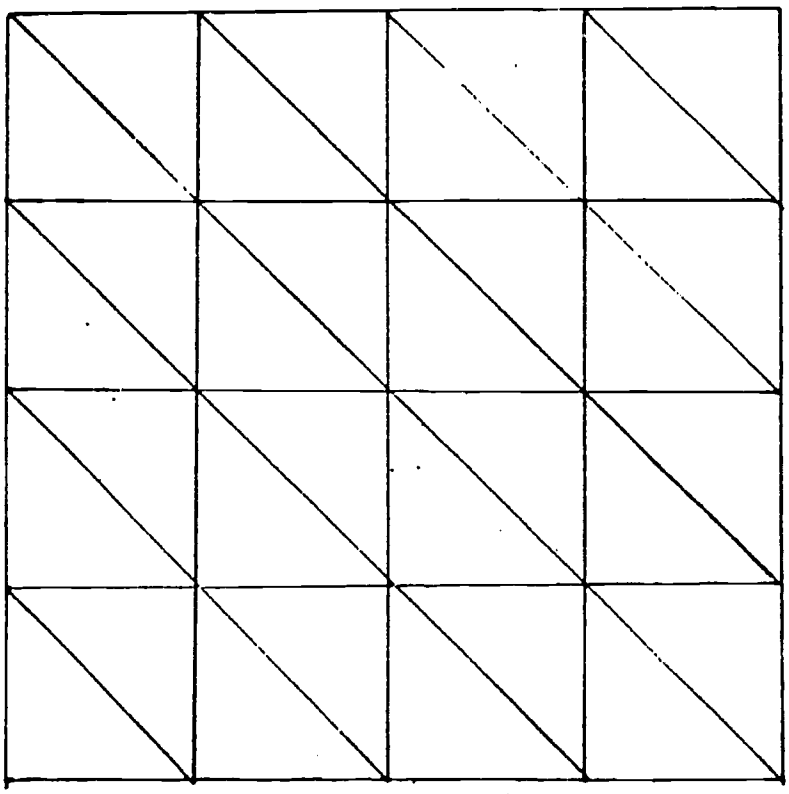


by:
Matt Glavich

Be 45

Draw This Design Below





Section C

GENERAL CONCEPT DEVELOPMENT
(SETS, TIME, SEQUENCING)

The ability to reason, classify, link, associate or otherwise 'make sense' out of certain connected facts or figures is a very necessary ability in order to learn. Many educationally handicapped students have not developed this quality and need exercises to allow them to progress. To understand that a monkey and dog are both animals, or that a shoe and a glove are both clothing are simple abstractions that most children learn through normal growth experiences. The E.H. child frequently has missed this link in education. Some of the following exercises will be useful to those children who have a concept development deficit.

Example a - pages 49 - 52
Exercises in reasoning, generalizing and concept forming

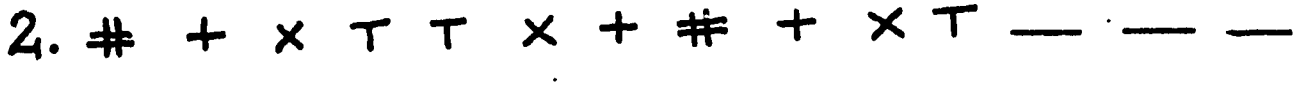
Example b - pages 54 - 70
Time concept - Months of the year

Example c - pages 72 - 79
The concept of "Set" and "Quantity"

Sample exercises in concept formation, generalization, reasoning.

Pattern Completion

1.

2. 

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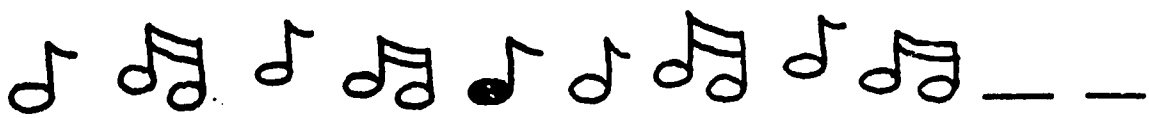
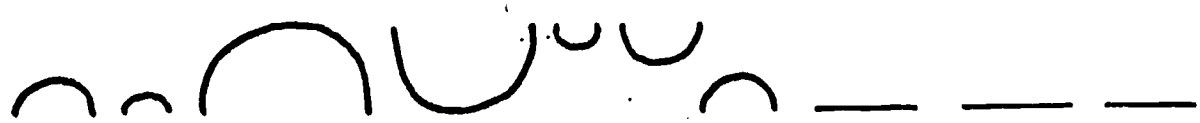
4. 

5. 

EACH OF THE FOLLOWING IS A PART OF WHAT?

1. page _____
2. sleeve _____
3. finger _____
4. door _____
5. feather _____
6. petal _____
7. whiskers _____
8. branch _____
9. buckle _____
10. words _____

UNDERLINE THE CORRECT ANSWER

1. A dog is (an animal, bark, black).

2. Fire is (cold, hot, big.)

3. A doll is a (dress, girl, toy).

4. An orange is a (fruit, vegetable, candy).

5. A flower is a type of (animal, plant, vegetable).

SENTENCE SEQUENCE

Put the following sentences in order

____ The monkey waved back.

____ Billy went to the zoo.

____ He threw the monkey a peanut

____ Billy was tired and went home.

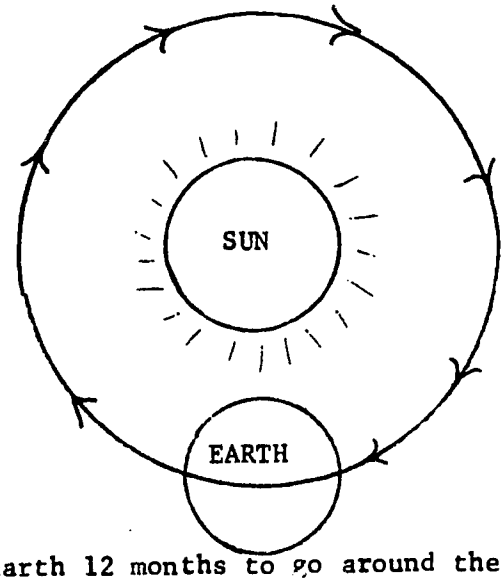
____ Billy left home in the morning.

____ He saw a monkey.

____ Billy waved goodbye to the monkey.

____ The monkey ate the peanut.

There are 12 months in one year.



It takes the earth 12 months to go around the sun.

It takes _____ year for the earth to go around the sun.

1.

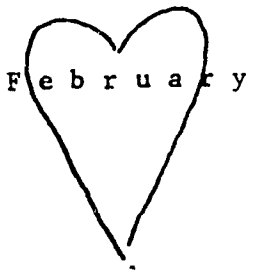
FOLD TO HERE

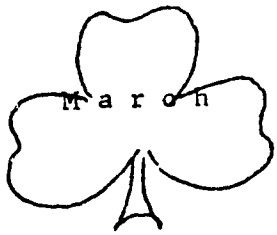
A PROGRAMMED TIME - SEQUENCE SERIES

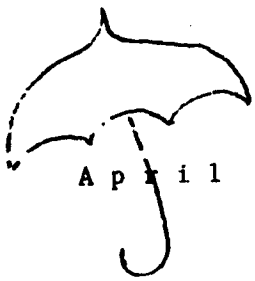
by: Nancy Raye
Sylvia Vandermeer
Caro Wood

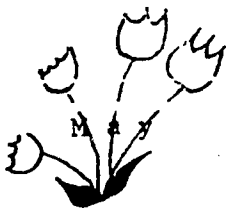
FOLD TO HERE

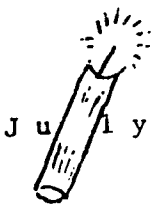
The 12 months have names

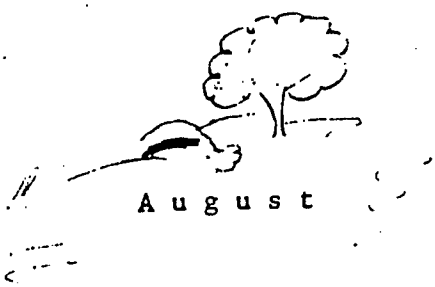


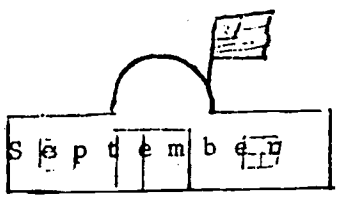


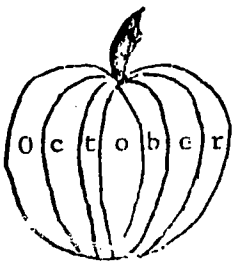


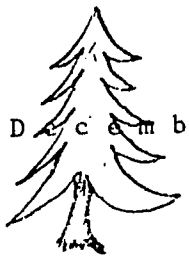












On what day did the month begin? _____

On what day will the month end? _____

On what day is the 10th of the month? _____

On what day is the 14th of the month? _____

On what day is the 2nd of the month? _____

On what day is the 21st of the month? _____

On what day is the 5th of the month? _____

On what day is the 19th of the month? _____

HOW MANY?

How many Sundays in the month? _____

How many Mondays in the month? _____

How many Tuesdays in the month?

How many Wednesdays in the month? _____

How many Thursdays in the month? _____

How many Fridays in the month? _____

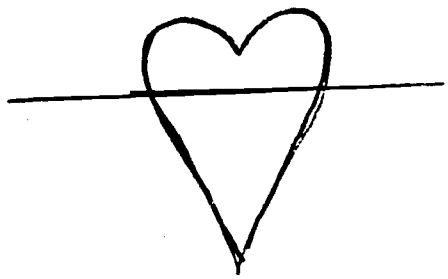
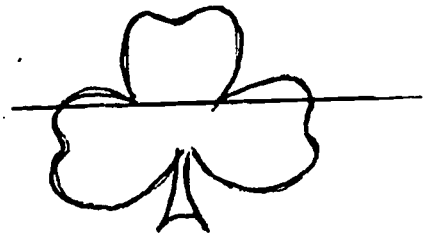
How many Saturdays in the month? _____

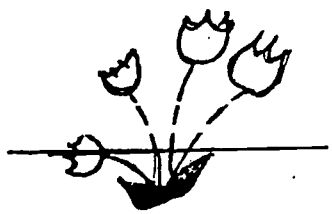
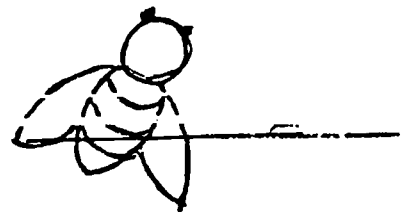
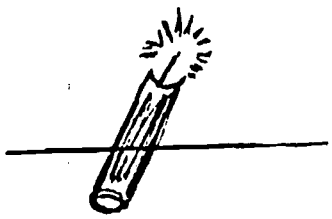
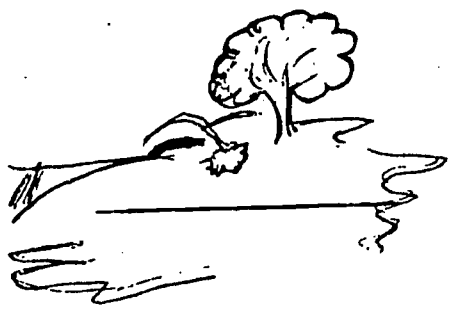
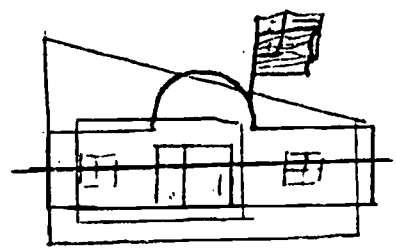
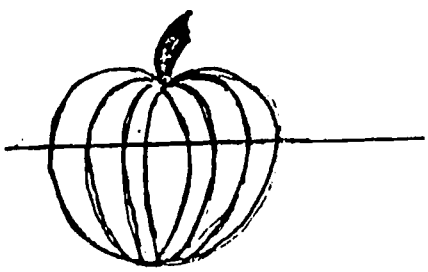
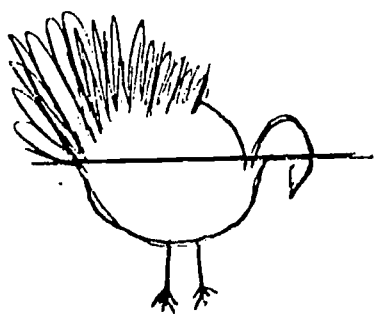
MAKE A CALENDAR FOR THIS MONTH

...NDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY

COLOR EACH WEEK A DIFFERENT COLOR

The names of the months are:

1. January 2. February 3. March

COLOR

January - white February - red March - green

J _ _ _ _ _ _ F _ _ _ _ _ _ _ M _ _ _ _

The 1st month is _____

The 2nd month is _____

The 3rd month is _____

February January March

1st _____

2nd _____

3rd _____

January 2nd

February 3rd

March 1st

January brings the snow

Makes our feet and fingers glow.

Which month?

_____

February is the time

For you to be my valentine.

Which month?

_____

March, a shamrock colored green

The day St. Patrick makes the scene.

Which month?

_____

FOLD TO HERE

January

February

March

January

February

March

January

February

March

FOLD TO HERE

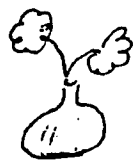
A P R I L - M A Y Whose fool are you?

The next month is APRIL.

Sometimes it showers.

But be not dismayed

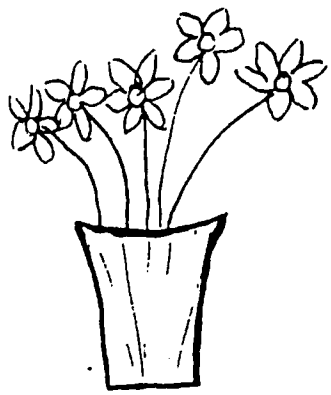
For MAY brings flowers.



J U N E

June brings tulips lilies and roses,

And fills the children's hands with posies.

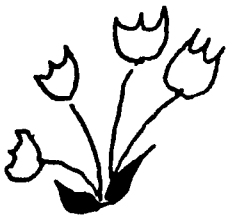


FOLD TO HERE

WHICH MONTH?

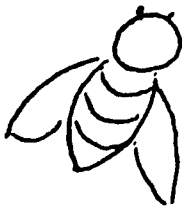
brings showers?

_____



brings flowers?

_____



brings bugs?

_____

April

May

June

BRAIN TEASERS

5th January	April	1st May

1. _____ is the 4th month.
2. In _____ the flowers bloom.
3. The _____ of _____ is April Fools Day.
4. May is the _____ month.
5. _____ is the month before February.
6. I like _____(which month) the best.

April

May

1st April

5th

January

FOLD TO HERE

7. July 8. August 9. September

FOLD TO HERE

J _____ July

A _____ August

S _____ September

Put in order:

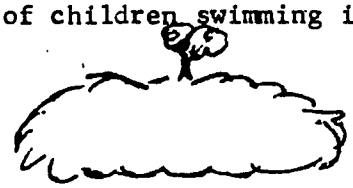
September August July

_____ _____ _____

Make a picture of you lighting firecrackers.

Which month? _____ July

Draw lots of children swimming in the lake.



Which month? _____ August

Draw you on the first day of school.

Which month? _____ September

FOLD TO HERE

Write the months from January to June

1. _____ 2. _____

3. _____ 4. _____

5. _____ 6. _____

Write the name of the month that rhymes with day. _____ May

Write the name of the month that rhymes with moon. _____ June

Name the month that tells what soldiers do. _____ March

What two months end with "ary"? _____ _____ January February

What month has a foolish day? _____ April

YES OR NO

September comes after August. Yes

June and July are the 6th and 7th month. Yes

April comes before February. No

The month after May is July. No

School is out in March. No

The flowers bloom in May. Yes

There is no school in July and August. Yes

School starts in February. No

It snows in July. No

January comes before February. Yes

Trees get leaves in January. No

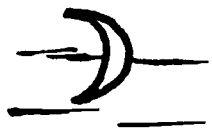
FOLD TO HERE

FOLD TO HERE

Cut out the names of the month. Paste them in order.

1st
2nd
3rd
4th
5th
6th
7th
8th
9th

February | April | June | August | September | January | July | May | March



What a witchy month!

ctober

August September 0 _____

_____ is after September

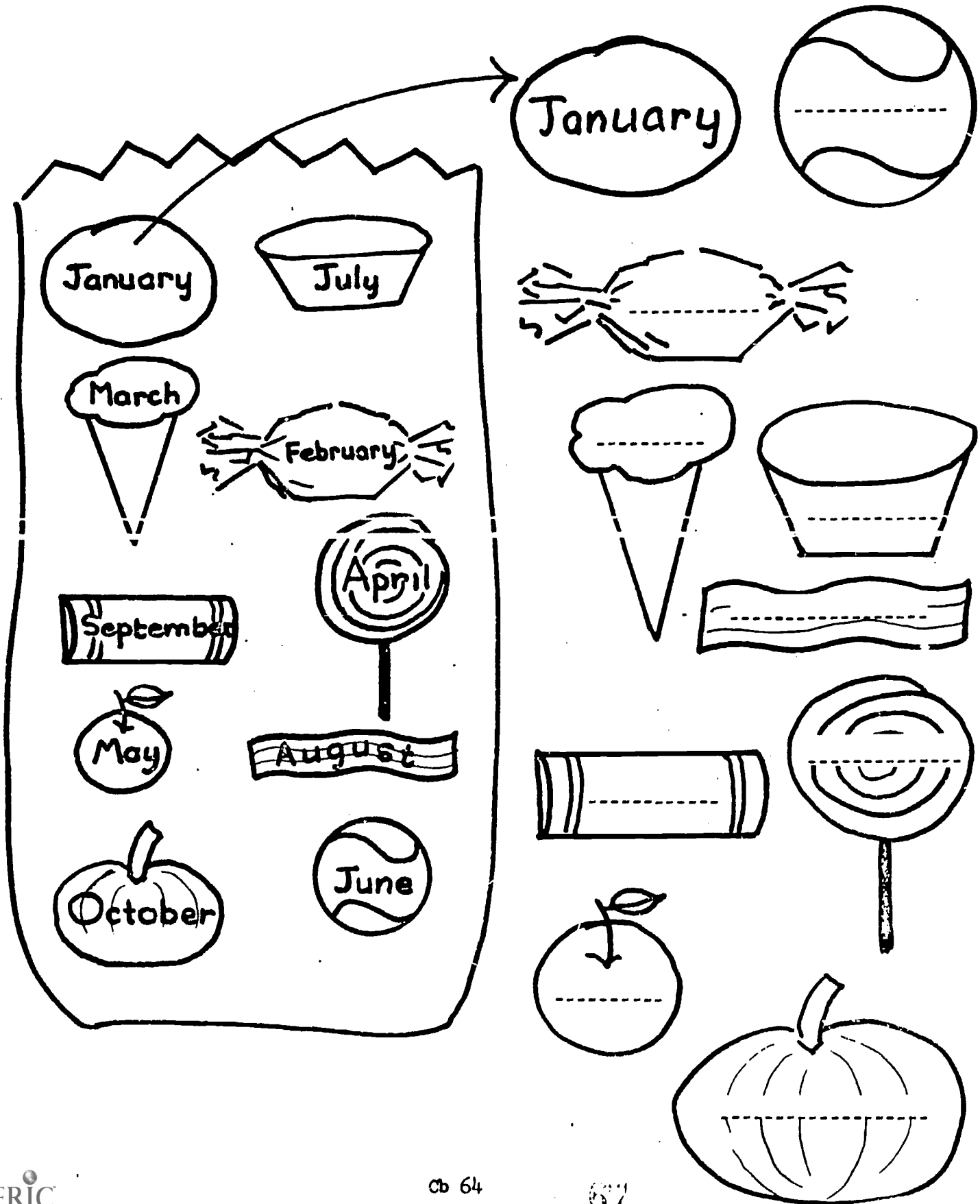
The 10th month is _____

The 9th month is _____

The 8th month is _____

August September _____

TRICK or TREAT BAG



Who comes in November? _____

He says "gobble, gobble". _____

We eat him for dinner. _____

Who is he? _____

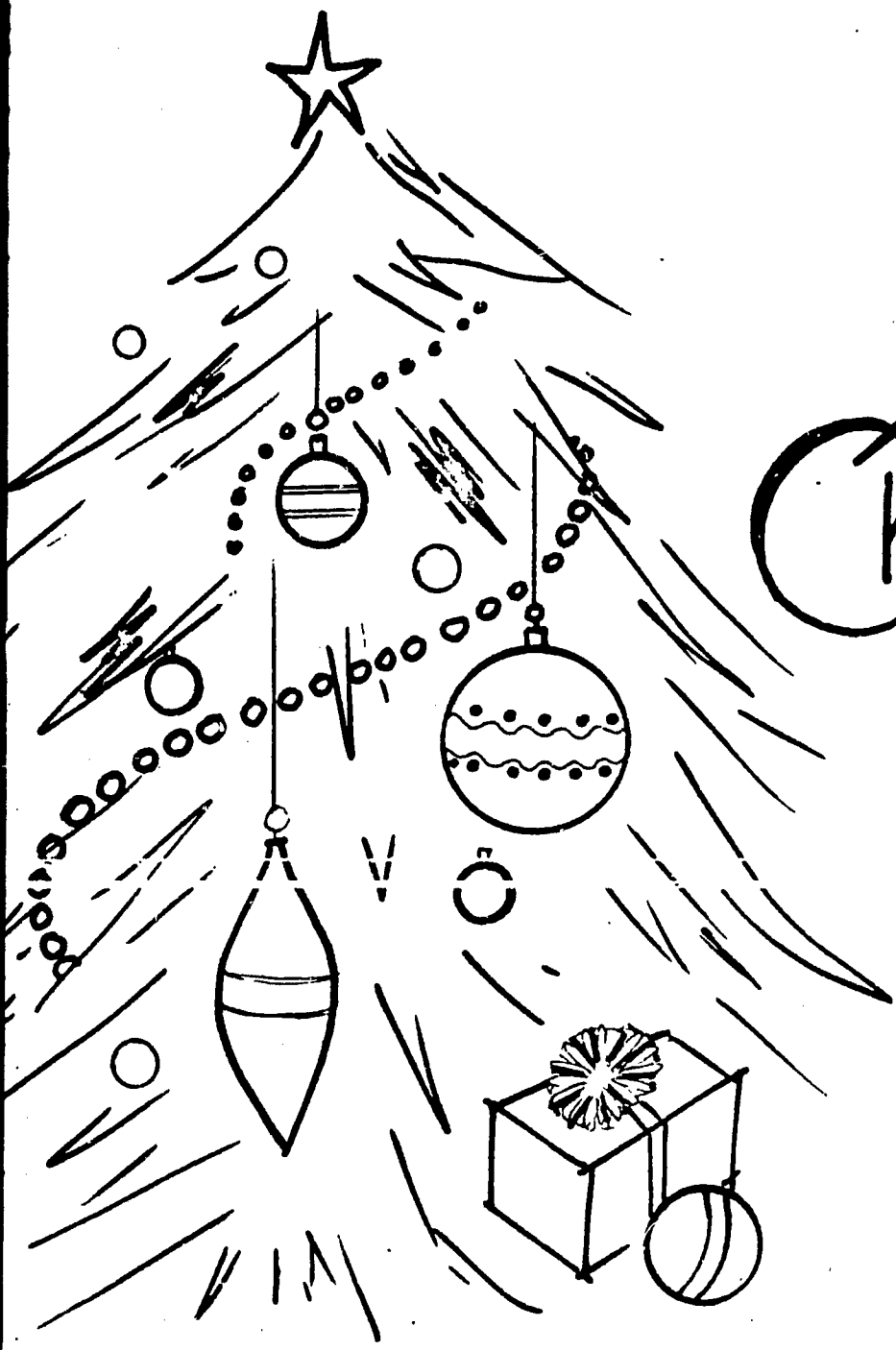
Draw his picture!

October N _____ December

August September O _____

August September O _____ N _____

July August S _____ O _____ N _____



Christmas!

Can you name this month?

_e_e__e_

Which month do we:

Trick or Treat?

10th O _____

eat Turkey

11th N _____

have Christmas

12th D _____

1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th

October is the _____ month

November is the _____ month

December is the _____ month

December October November

10th _____

11th _____

12th _____

November October December

10th _____

11th _____

12th _____

December November October

10th _____

11th _____

12th _____

FOLD TO HERE

October

November

December

10th

11th

12th

October

[illegible]

December

October

November

December

October

November

December

FOLD TO HERE

Write the months from June to December

6th _____ 7th _____

8th _____ 9th _____

10th _____ 11th _____

12th _____

August comes before _____ September

September comes after _____ August

September comes between _____ and _____ August October

November comes before _____ December

October comes after _____ September

November comes after _____ October

September comes before _____ October

FOLD TO HERE

WAY BACK

_____ _____ January July

_____ _____ February August

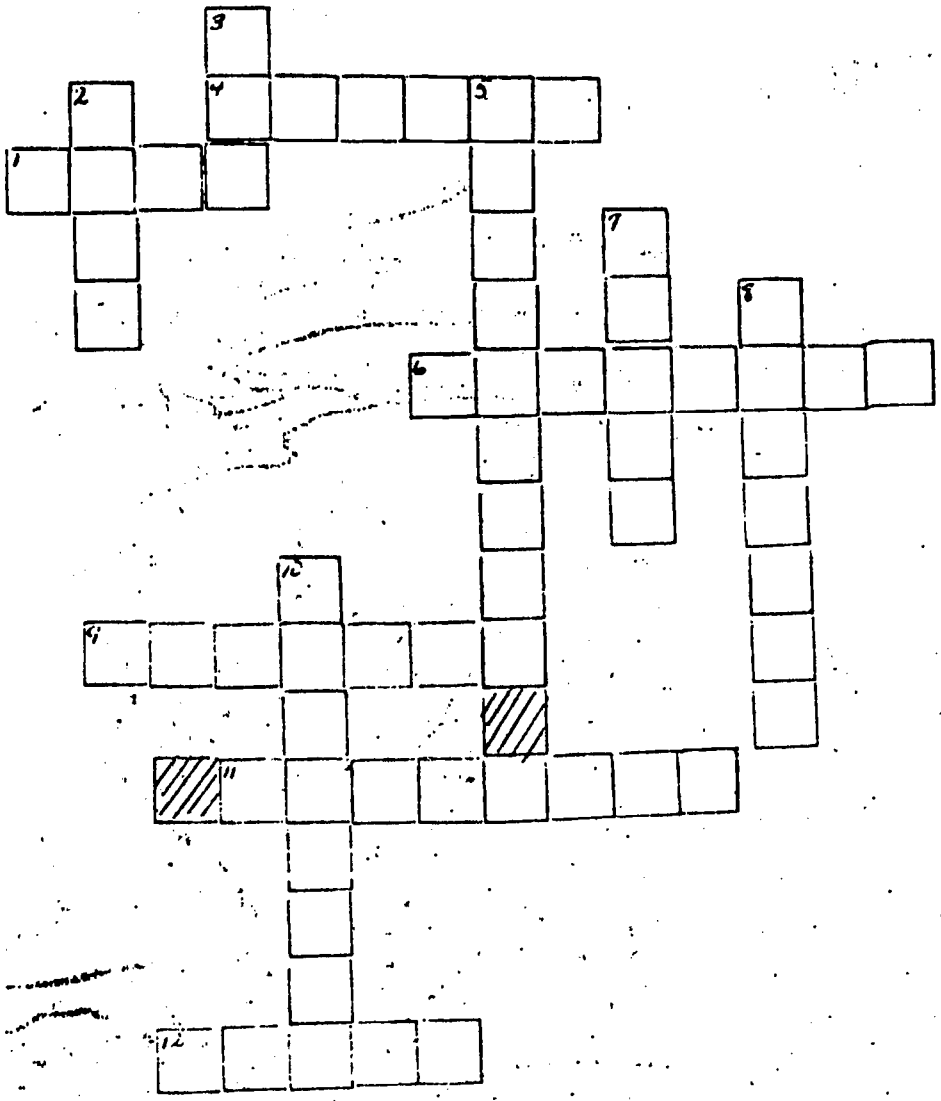
_____ _____ March September

_____ _____ April October

_____ _____ May November

_____ _____ June December

FOLD TO HERE



ACROSS

1. The 7th month
4. The month before September
6. The month we give out valentines
9. The month of pumpkins and witches
11. The last month of the year
12. The month between February and April

DOWN

2. The month school is out
3. The month that rhymes with play
5. The month school begins
8. The first month of the year
9. The month after October

On the lines below, write the names of the twelve months of the year.

1. __ __ __ __ __ __ __
1 2 3 4 5 6 7

2. __ __ __ __ __ __ __ __
8 9 10 11 12 13 14 15

3. __ __ __ __ __
16 17 18 19 20

4. __ __ __ __ __
21 22 23 24 25

5. __ __ __
26 27 28

6. __ __ __ __
29 30 31 32

7. __ __ __ __
33 34 35 36

8. __ __ __ __ __ __
37 38 39 40 41 42

9. __ __ __ __ __ __ __ __ __
43 44 45 46 47 48 49 50 51

10. __ __ __ __ __ __ __
52 53 54 55 56 57 58

11. __ __ __ __ __ __ __ __
59 60 61 62 63 64 65 66

12. __ __ __ __ __ __ __ __
67 68 69 70 71 72 73 74

Copy the correct letters in the lines below.

__ __ __ __ __ __ __ __ __ __ __ __ __ __ __
29 4 25 28 5 3 67 13 30 39 40 41 46 2 6 9

__ __ __ __ __ __ __ __ __ __ __ __ __ __ __
31 2 71 32 67 2 8 42 32 11 33 34 35 24 34 43

__ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __.
2 31 67 2 4 39 4 43 46 30 41 19 2 9 41 2 58

__ __ __ __ __ __ __ __ __ __ __ __ __
8 24 31 67 24 3 39 19 55 67 32 67

__ __ __ __ __ __ __ __ __ __ __ __ __ __ __.
63 32 41 41 13 39 9 41 24 41 8 4 3

SEQUENCE: COGNITIVE

The following sequence deals with the concept of sets and the properties of sets.

Mathematics is a natural sequential learning experience. However, it may be difficult for the child with learning disabilities to grasp the concept of the term "set" and truly understand what it means.

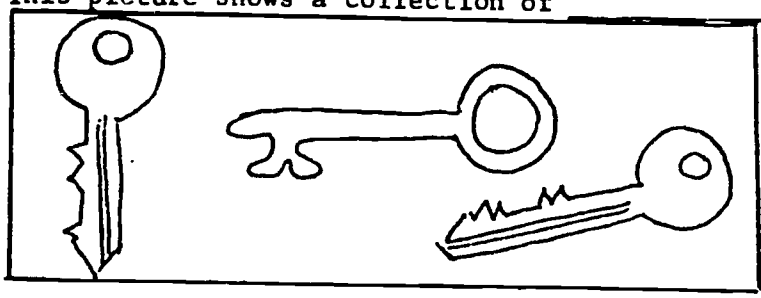
Therefore, a basic sequential series could be used. This series is composed of members of gradual difficulty and has a review section.

by

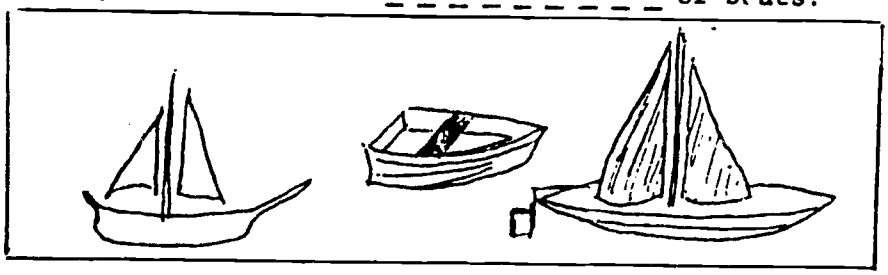
Steven Fasteau

Sets: Thinking about collections of things.

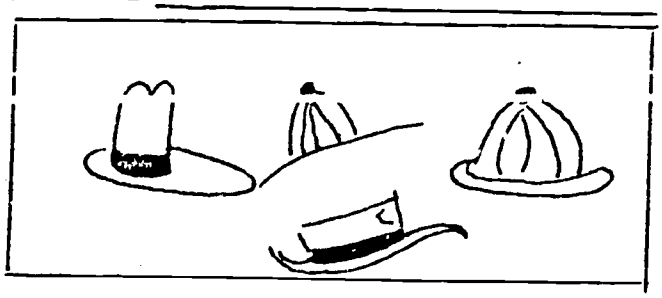
1. This picture shows a collection of _____.



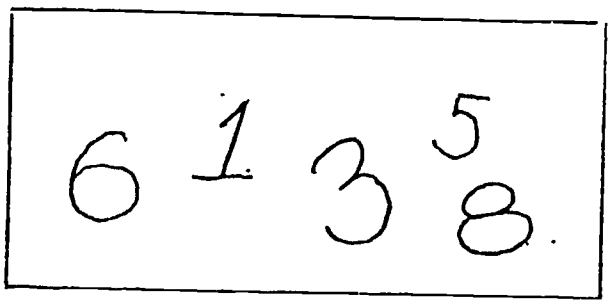
2. This picture shows a c _ _ _ _ _ _ _ _ _ _ of boats.



3. Here is a _____ of hats.



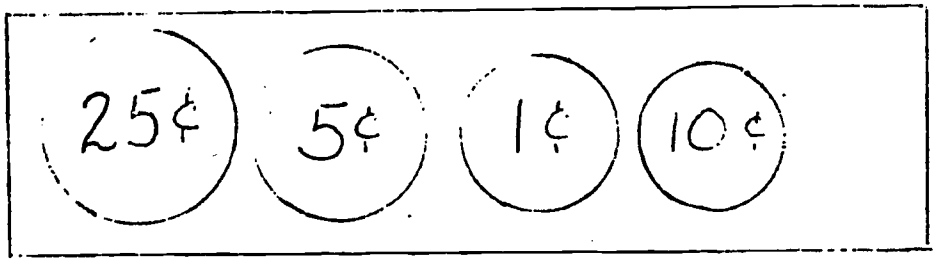
4. This picture stands for a collection of numbers. There are all numbers in this c_____.



In mathematics we think of any collection of things as a set.

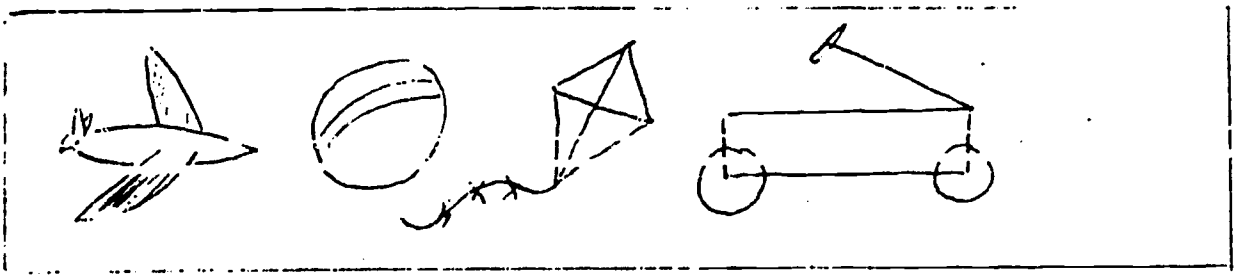
1. A set may be thought of simply as a col_____ of things.

2. This is a picture of a collection, or set of coins.

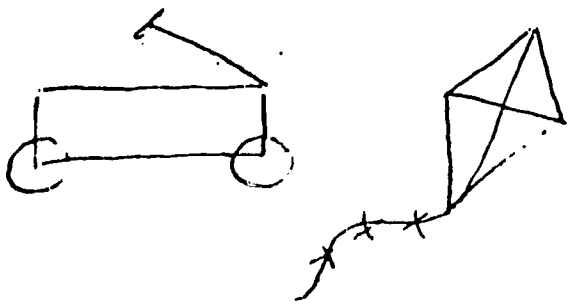


3. The coins above belong to a s _ _.

4. Here is a drawing of some toys. It shows a set of toys. When we draw a set, we draw a line or box around it.



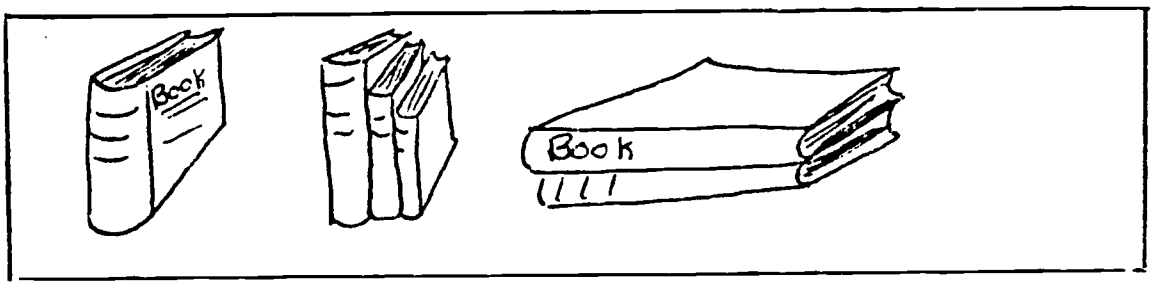
5. The things that belong to the set shown above are:



and _____

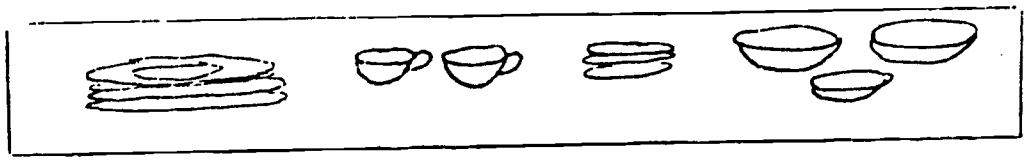
(draw your own)

1. This is a picture of a collection of _____.



2. A collection of books is a s_ _, even when they do not look alike.

3. Here is a _____ of dishes.



4. Any collection of things may be thought of as a _____.

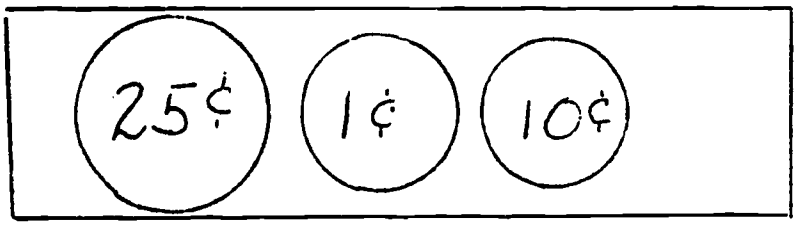
5. Could a collection of elephants be a set?_____.

6. A collection of numbers can be called a _____ of numbers.

7. A collection of pictures can be called a set of p_____.

A set is a collection of any-old-things
Including, names, numbers, animals or kings

Sets and Members of Sets



Here is a picture of all the members of a set of coins.

1. The money shown in this picture is a collection of coins that can also be called a _____ of coins.

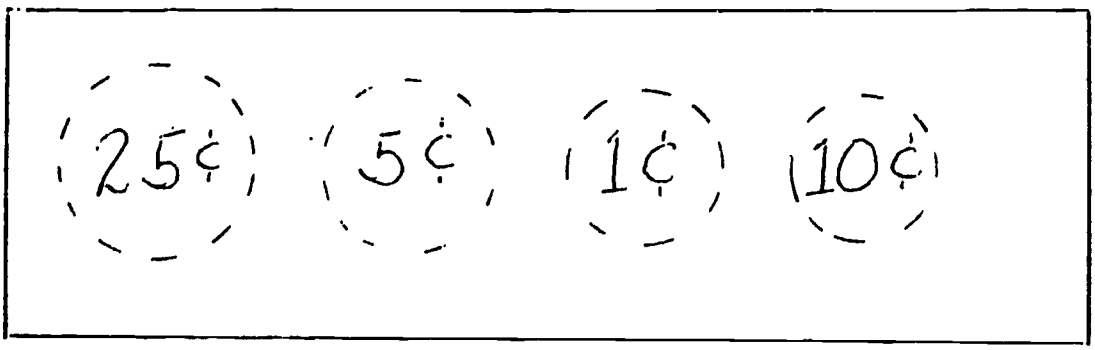
2. This set is made up of coins. It shows a quarter, a dime and a p _ _ _ _.

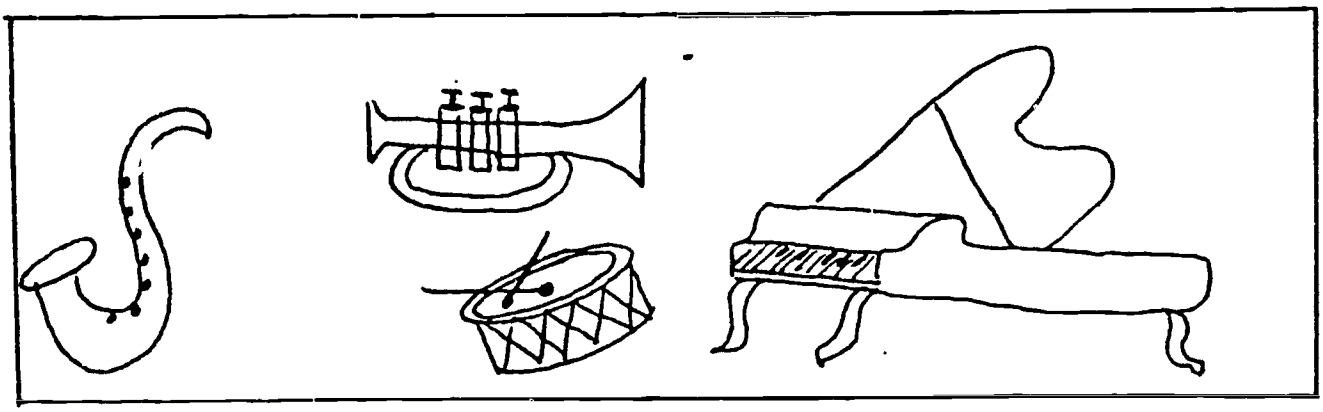
3. The members of this set are: a quarter, a _ _ _ _ and a penny.

4. How many members are in this set? _____

5. The set shown above has three m _ _ _ _ _ _.

6. Draw a picture of the members of this set of coins.





Here is a picture of a set of musical instruments.

1. How many instruments belong to this set of musical instruments? _____

2. The drum belongs to this _ _ _ of musical instruments.

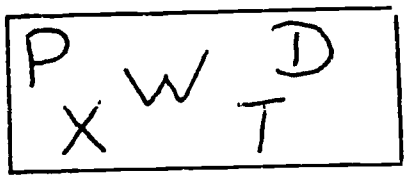
3. The drum is a mem _ _ _ of this set.

4. One member of the set is the drum. This set has three other _____.

5. Besides the drum, the three other members of this _____ are the saxophone, trumpet and the piano.

6. The set of instruments shown above has four m _ _ _ _ _ _.

Anything that belongs to a set is called a member of the set.



Look at this set of letters.

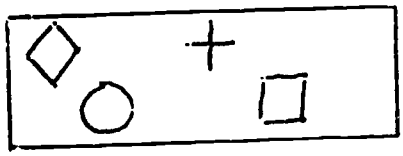
1. How many members are there in this set of letters? _____

2. The letter "T" belongs to this _____ of letters.

3. The letter "T" is a _____ of this set of letters.

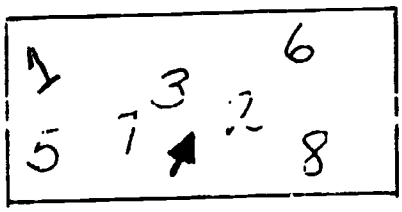
4. The members of this set of letters are:

_____, _____, _____, _____, and _____.

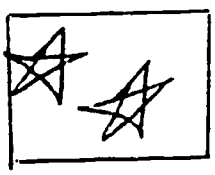
5. 

The members of this set are:

and _____
(draw it)

6. 

The numbers 1, 5, 3, 6, 7, 2, ▲, and 8 are the _____ of the set of numbers shown in this picture.



1	2	3
4	5	6
7	8	9
10	11	12

Jan.	May	Sept.
Feb.	June	Oct.
Mar.	July	Nov.
Apr.	Aug.	Dec.

1. The set of _____ has two members.

2. The set of months has _____ members

3. The set of numbers has _____ members

4. The set of _____ has the same amount of members as the set of numbers.

5. A set of the days of the week has how many members? _____

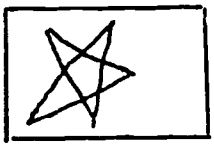
6. The set of people in this class has how many members?_____

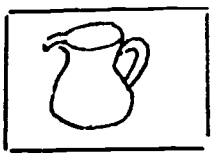
7. A _____ may be made up of any number of members.

Some sets have only one member.

1. Wednesday is the day of the week whose name begins with the letter_____.

2. The set made up of the days of the week whose names begin with "W" has only one member.

3.  How many members does this set have?_____

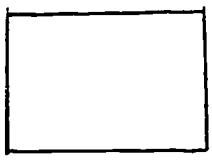
4.  This is a picture of a set having only one m_____

5. How many even numbers come between 3 and 5? _____

6. The one member of the set of even numbers between 3 and 5 is the number _____.

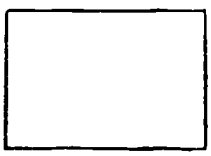
7. 4 is the only _____ of the set of even numbers between 3 and 5.

Some sets have no members

1.  This is a picture of a set that has no m _ _ _ _ _ _.

2. Think of the set of pupils in your class who are over ten feet tall. This _____ has no members.

3. There are _____ members belonging to the set of pupils in your class who are over ten feet tall.

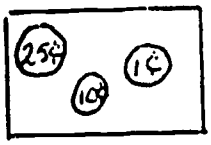
4.  Here is a picture of the set of pupils who are ten feet tall. The picture shows no _____.

5. There are _____ days of the week whose name begins with the letter "X".

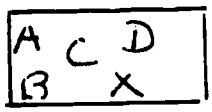
6. No members belong to the _____ of the days of the week whose names begin with "X".

7. A _____ that has no members is called an empty set.

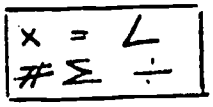
REVIEW:

1. 

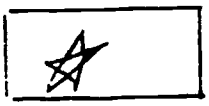
The collection of money shown here can be called a _ _ _ of money.

2. 

Each letter that belongs to the set shown in this picture is called a _ _ _ _ _ _ of the set.

3. 

Some sets have several members. This set has how many members?_____

4. 

Here is a set that has only _____ member.

5.

Here is a set that has _____ members.

6. We call a set that has no members a null set or an e _ _ _ _ set.

7. A n _ _ _ set has no members.

8. An e _ _ _ _ set has no members.

9. Two different terms for a set having no members are _ _ _ _ set and _ _ _ _ _ set.

Section D

QUANTATIVE CONCEPT DEVELOPMENT

Exercises in this section are not needed by all educationally handicapped students. Not infrequently, teachers will find that quantative or computational ability are not problems to specific E.H. children. Where there is a problem, the teacher should assess the students' level of understanding of quantity and provide exercises that will allow him to progress, in very small steps, up through the more abstract, complex facets of quantative concept skills.

Obviously, the exercises included herein represent neither a sequential series of tasks nor a complete one. These are merely a few ideas of the way certain quantative concepts may be presented in an interesting, challenging format.

Quantative concepts are the easiest to sequence since there is generally a logical learning progression.

Example a - pages 82 - 83
Two short exercises - Logic and Reasoning
Battleship - Quantative Memory

Example b - pages 84 - 88
Borrowing and Carrying

Example c - pages 89 - 111
Rewriting State Text for E.H. students

Example d - pages 91 - 94
Dune Buggy - Understanding number concepts and relationship between addition and subtraction

Example e - pages 95 - 115
Measuring with the ruler - 1" to 6"

Example f - pages 116 - 118
Addition and Subtraction combinations

Example g - pages 119 - 126
Reasoning skills - quantity and size

Example h - pages 127 - 143
Numerical reasoning - greater or less

Logic and Reasoning

1. If Don is taller than Ray, but Ray is taller than Bob, then:

   a) Ray is the shortest
   b) Bob is taller than Don
   c) Don is taller than Bob

2. Sharon is 12 years old. If Sharon is five years older than her sister Kay, and Kay is two years older than her brother Jon, then Jon is:

   a) 6 years old
   b) 5 years old
   c) 4 years old

3. Find the area of a circle with a 2 inch radius.

LONG TERM MEMORY

ACTIVITY: Game - Battleship

PURPOSE: The purpose of the game is to help students learn and remember their multiplication tables. This game provides practice with the multiplication tables in an enjoyable situation and will facilitate learning and memory.

BATTLESHIP

X	0	1	2	3	4	5	6	7	8	9	10
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											

1. Draw ten battleships in any ten blocks on the above chart.
2. The teacher will then call off the selected numbers to be multiplied.
3. Record proper product in all <u>blank</u> blocks
4. If the block is occupied by a battleship, then the battleship is sunk by crossing it out.
5. The first student to sink all ten battleships is the winner.
6. All multiplication must be correct.

GOOD LUCK!

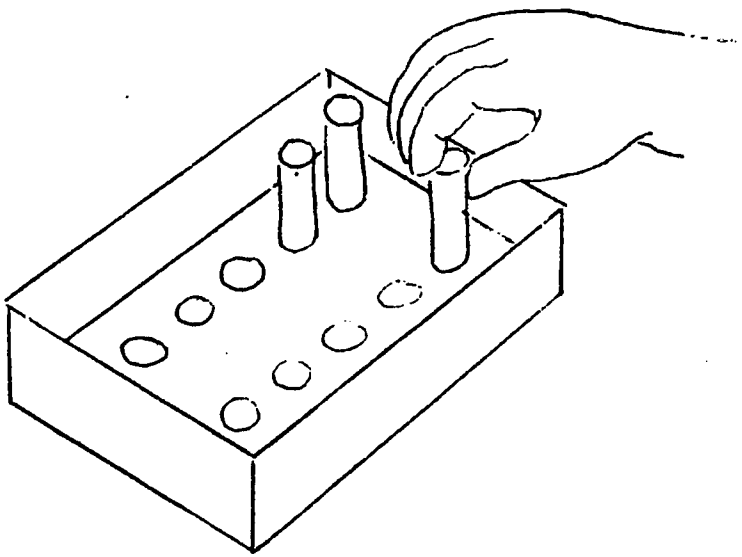
Development of the Concepts of Borrowing and Carrying

Instructions for the Teacher

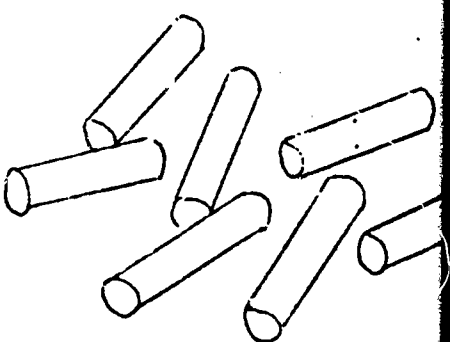
Carrying: This section is designed to reinforce the concept of 10 ones = 1 ten. The manipula
(TEN box) may be used by the student if it is needed.

This visual aid is used on the introductory pages and can be extended when necessary.

T E N S



O N E S



1 ten is 10 ones

ten ones = 1 ten

by

Chet C
Janis
Marge

MATHEMATICS

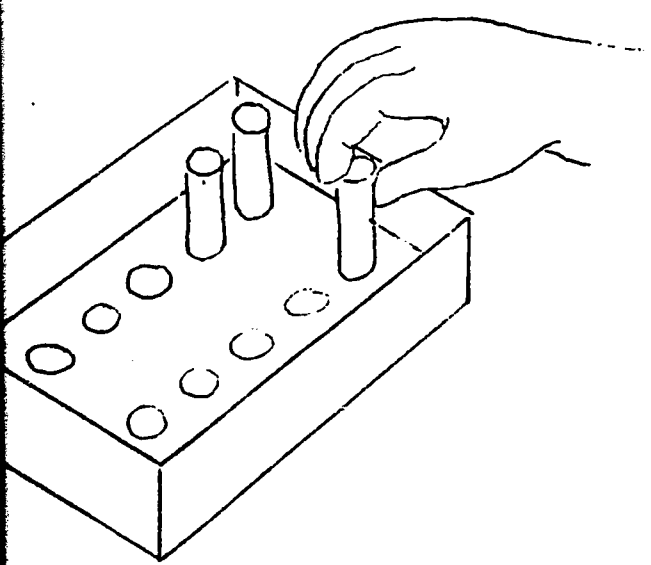
Development of the Concepts of Borrowing and Carrying

the Teacher

ection is designed to reinforce the concept of 10 ones = 1 ten. The manipulative device used by the student if it is needed.

s used on the introductory pages and can be extended when necessary.

T E N S



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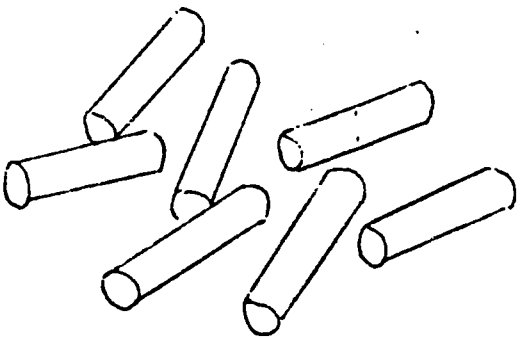


Db 84

1 ten is 10 ones

ten ones = 1 ten

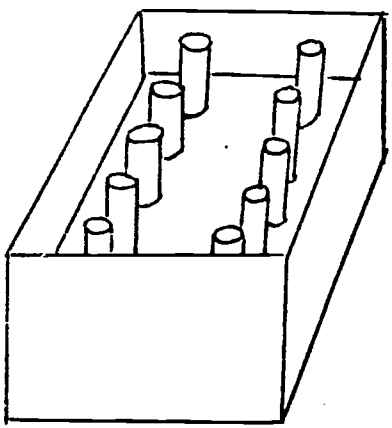
by

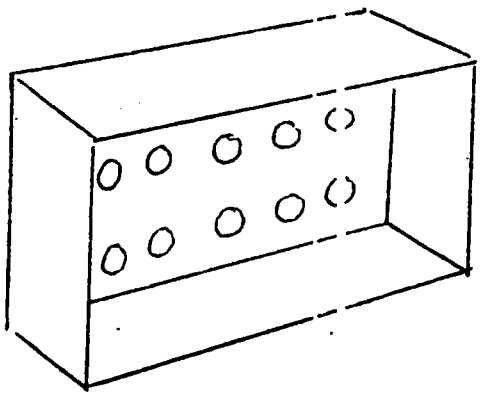
Chet Caldeira
Janis VanTilburg
Marge Ross

Instructions for the Teacher

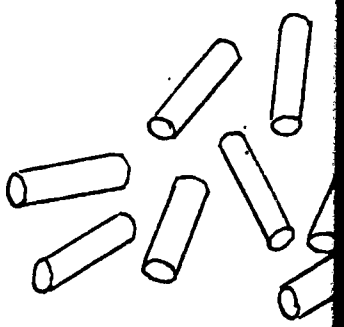
Borrowing: This section is designed to introduce and expand the concept of borrowing. These
not inclusive and it is anticipated that the teacher will have to expand upon the materials pr

Tens





Ones



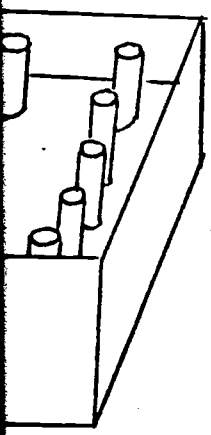
1 ten is 10 ones

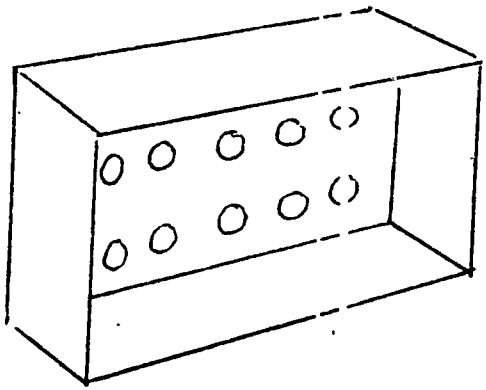
1 ten = 10 ones

r the Teacher

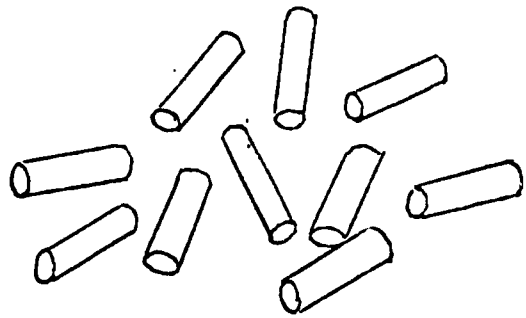
s section is designed to introduce and expand the concept of borrowing. These materials are nd it is anticipated that the teacher will have to expand upon the materials present.

Tens





Ones



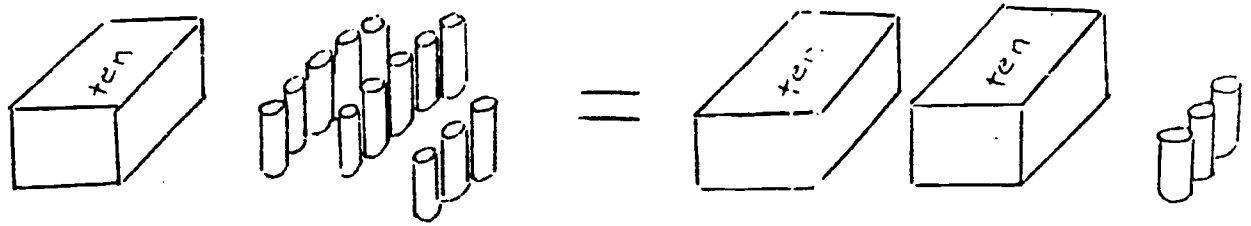
Db 85

1 ten is 10 ones

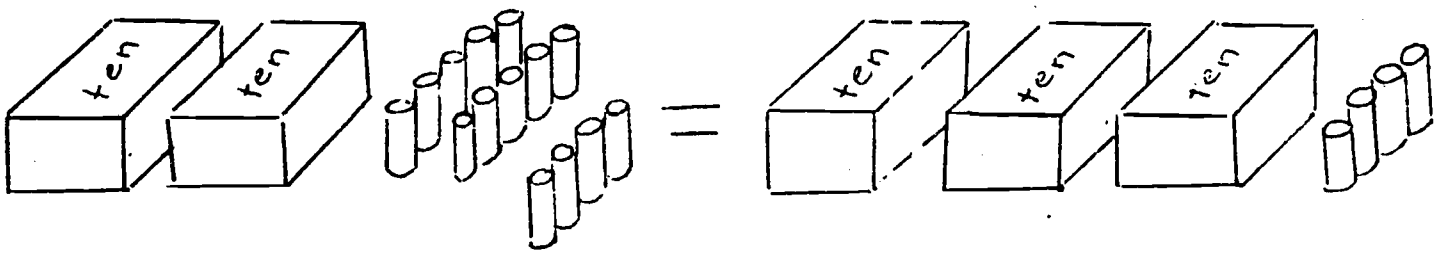
1 ten = 10 ones

89

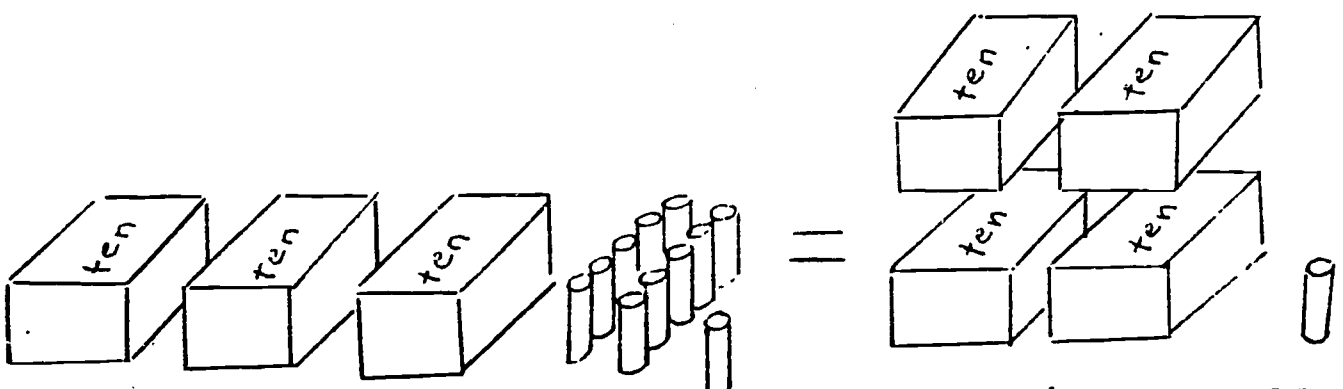
88



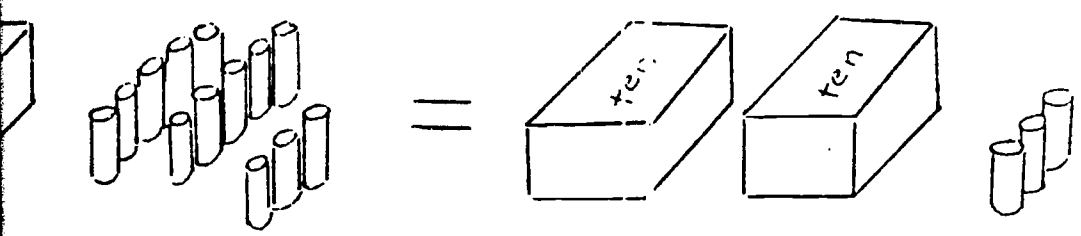
1 ten and 13 ones = 2 tens and 3 ones = 23



2 tens and 14 ones = _____ tens and _____ ones = _____

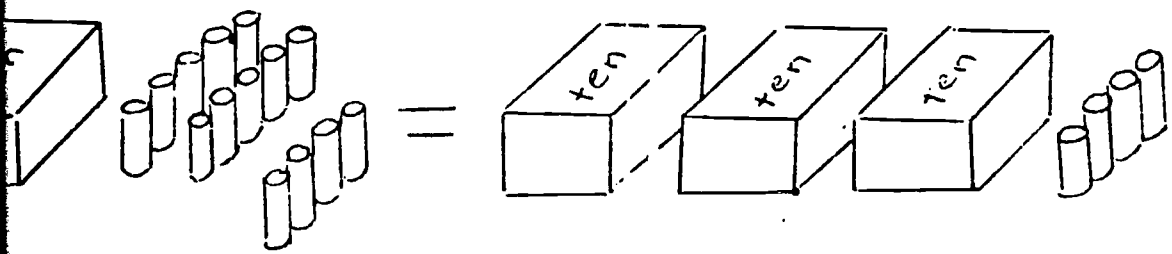


3 tens and 11 ones = _____ tens and _____ ones = _____



13 ones = 2 tens and 3 ones = 23

FOLD

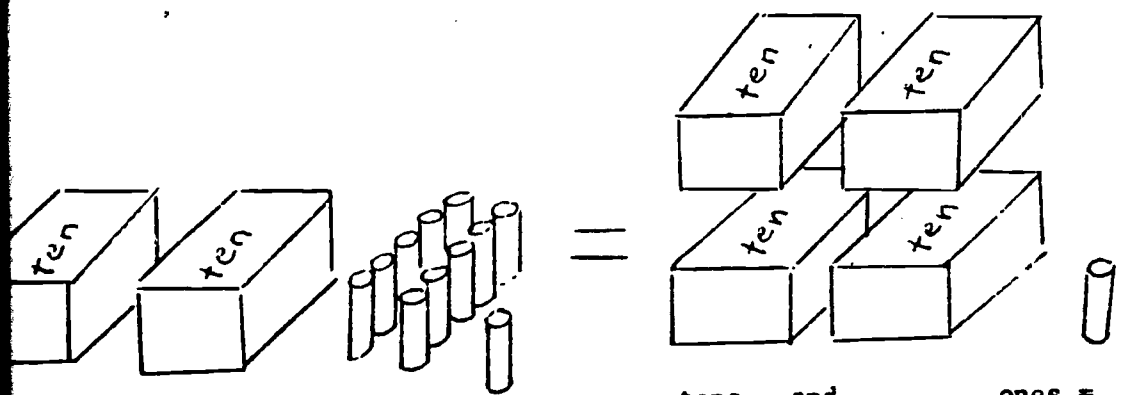


nd 14 ones = _____ tens and _____ ones = _____

3 tens and
4 ones

34

Db 86

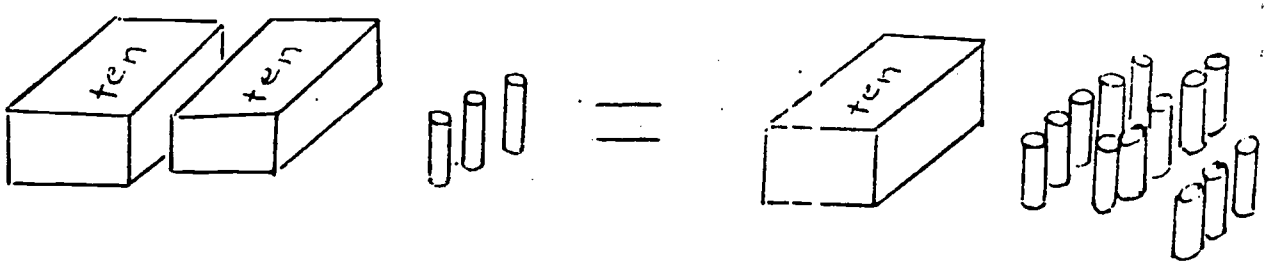


nd 11 ones = _____ tens and _____ ones = _____

4 tens and
1 one

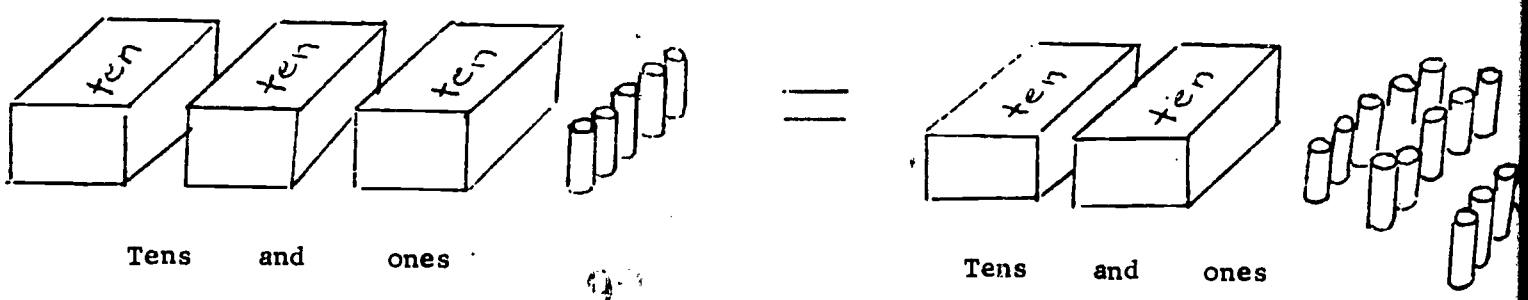
41

FOLD



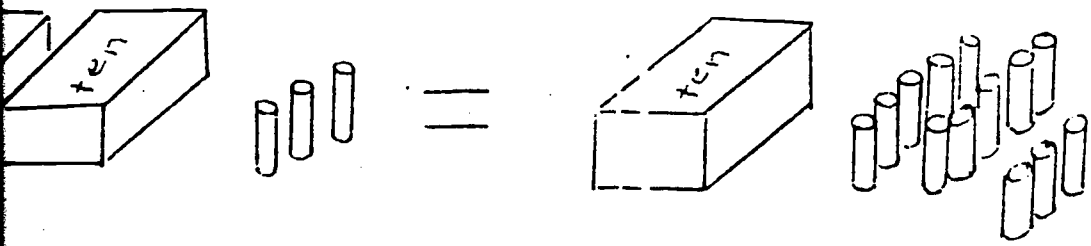
Tens and ones

Tens and ones



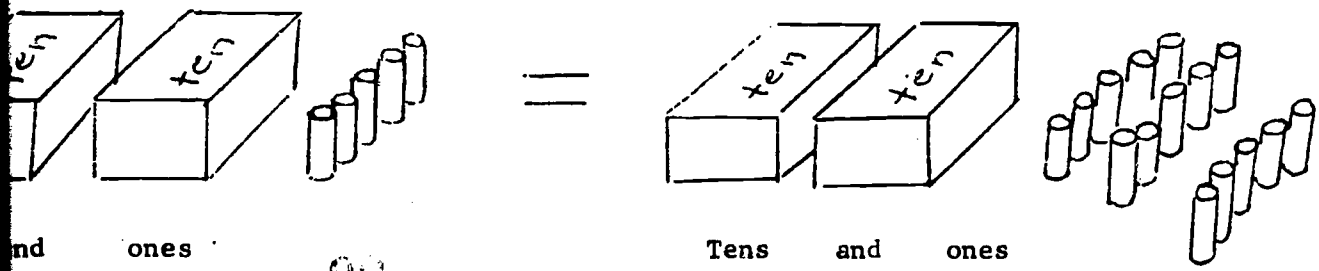
Tens and ones

Tens and ones



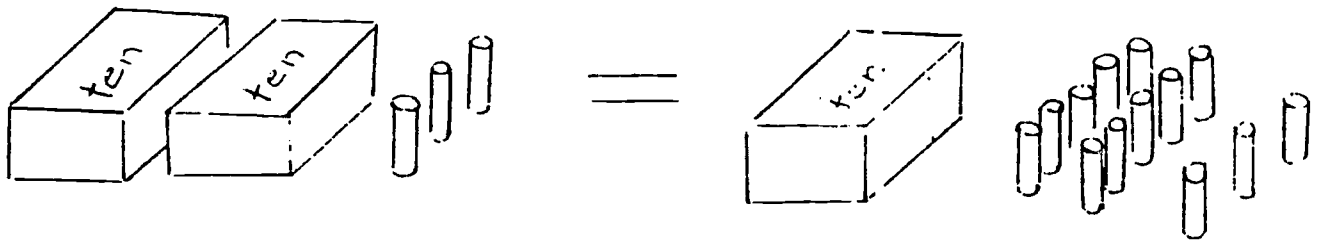
nd ones

Tens and ones

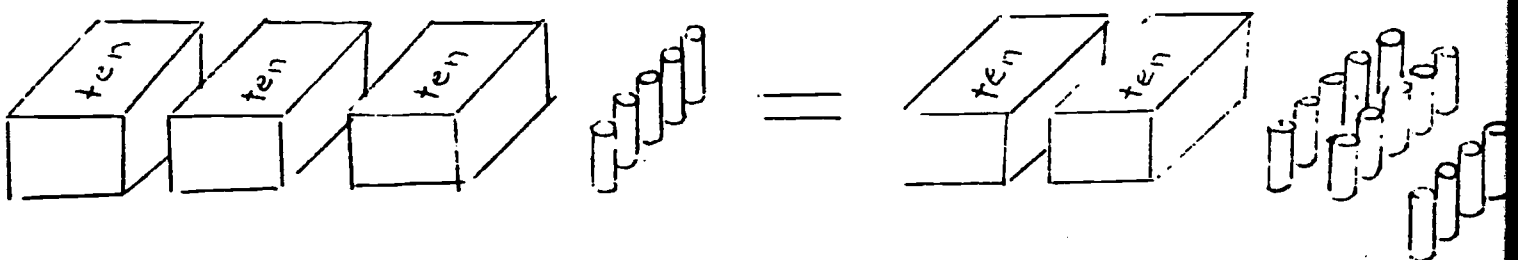


nd ones

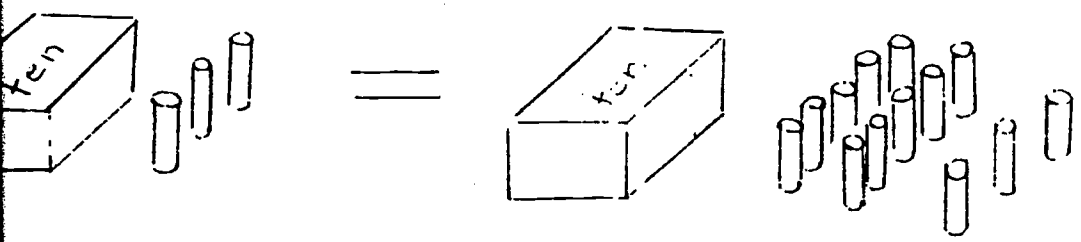
Tens and ones



23 = 2 tens and 3 ones = 1 ter and 13 ones

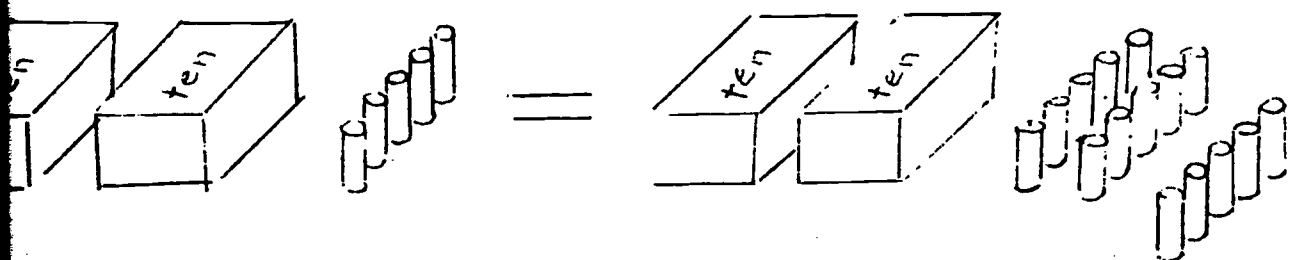


35 = 3 tens and 5 ones = ; tens and 15 ones



s and 3 ones = 1 ter and 13 ones

Db 88



tens and 5 ones = tens and 15 ones

TEACHING STORY PROBLEMS

from

Greater Cleveland Mathematics California State Series, Grade 3

In a Title I third grade, over half of the children are from one to two years below grade level in reading with some children unable to read a first grade book when they come to the third grade.

These same children can learn math at third grade level with little help except for the story problems. The math in the story problems is very simple but the children can't read the paragraphs.

The following is an example of changing the material by reducing the reading level. Lessons are typed on a primary typewriter.

MR. RIDDLEMAN

Page 192

1a. Polly was the first to answer the fourth riddle. At a carnival each of 4 clowns sold 8 balloons. _____ balloons were sold.

1b. Four clowns sold 8 balloons. _____ balloons were sold.

2a. Dick answered the fifth riddle. A king had 56 pearls. He wanted to have the same number of these jewels set in each of 7 crowns. Each crown would hold _____ pearls.

2b. A king had 7 crowns and 56 pearls. There were _____ pearls for each crown.

3a. Peter gave the answer to the sixth riddle. Each of 5 rabbits ate 2 bunches of carrots. In each bunch were 4 carrots. The rabbits ate _____ carrots.

3b. Five rabbits ate 2 bunches of 4 carrots each. _____ carrots were eaten.

4a. George gave the answer to the last riddle. A bus started out with 4 passengers. The bus made 6 stops. At each stop it took on 9 passengers and dropped off 4 passengers. _____ passengers were now on the bus.

4b. Four passengers were on a bus which made 6 stops. At each stop 9 passengers got on and 4 got off. _____ passengers were left.

by

Leonard Wood

PLAYTIME

Page 138

1a. The third-grade girls found a box of 25 jacks. They counted out 5 sets of jacks with the same number in each set. In each set there were _____ jacks.

1b. The girls had 25 jacks which they counted out in 5 sets. There were _____ jacks in each set.

2a. Janet picked up 2 jacks each time she bounced the ball. She bounced the ball _____ times to pick up 8 jacks.

2b. Janet picked up two jacks each turn. Janet had _____ turns to pick 8 jacks.

3a. Sally picked up 3 jacks each time she bounced the ball. To pick up 9 jacks, she bounced the ball _____ times.

3b. Sally picked up 3 jacks each turn. She had _____ turns to pick up 9 jacks.

4a. Alice played 3 games and picked up 4 jacks each game. She picked up _____ jacks.

4b. Alice picked up 4 jacks in each of 3 games. She picked up _____ jacks.

5a. Molly bounced the ball 6 times and picked up 12 jacks. She got the same number of jacks each time. Molly picked up _____ jacks on each bounce.

5b. Molly picked up 12 jacks in 6 turns. She picked up _____ jacks each turn.

CHANGING SIDES ON EQUATIONS

An Aid for Teachers of Modern Math

This is a simple device to help clarify for children the problems encountered when a teacher attempts to teach $\square - 1 = 4$, or other similar combinations.

A car with front ends in both directions is constructed of sturdy cardboard. Slots are cut as indicated on the attached model to permit the two-legged slider to be inserted and to slide up and down. The slider is prepared as indicated on the model, with the symbols in the places indicated.

In addition the teacher prepares three or four alternative inserts to place horizontally for more illustrations of the principle such as the 6 1 5 and 8 4 4 shown on the attached plans. He also prepares blank tabs, as illustrated.

The teacher holds the car up, with a blank tab inserted to cover the 5, and says, "You see, this says 'what $\square - 1 = 4$ The arrow here (pointing to it) points in the direction in which we read the number sentence."

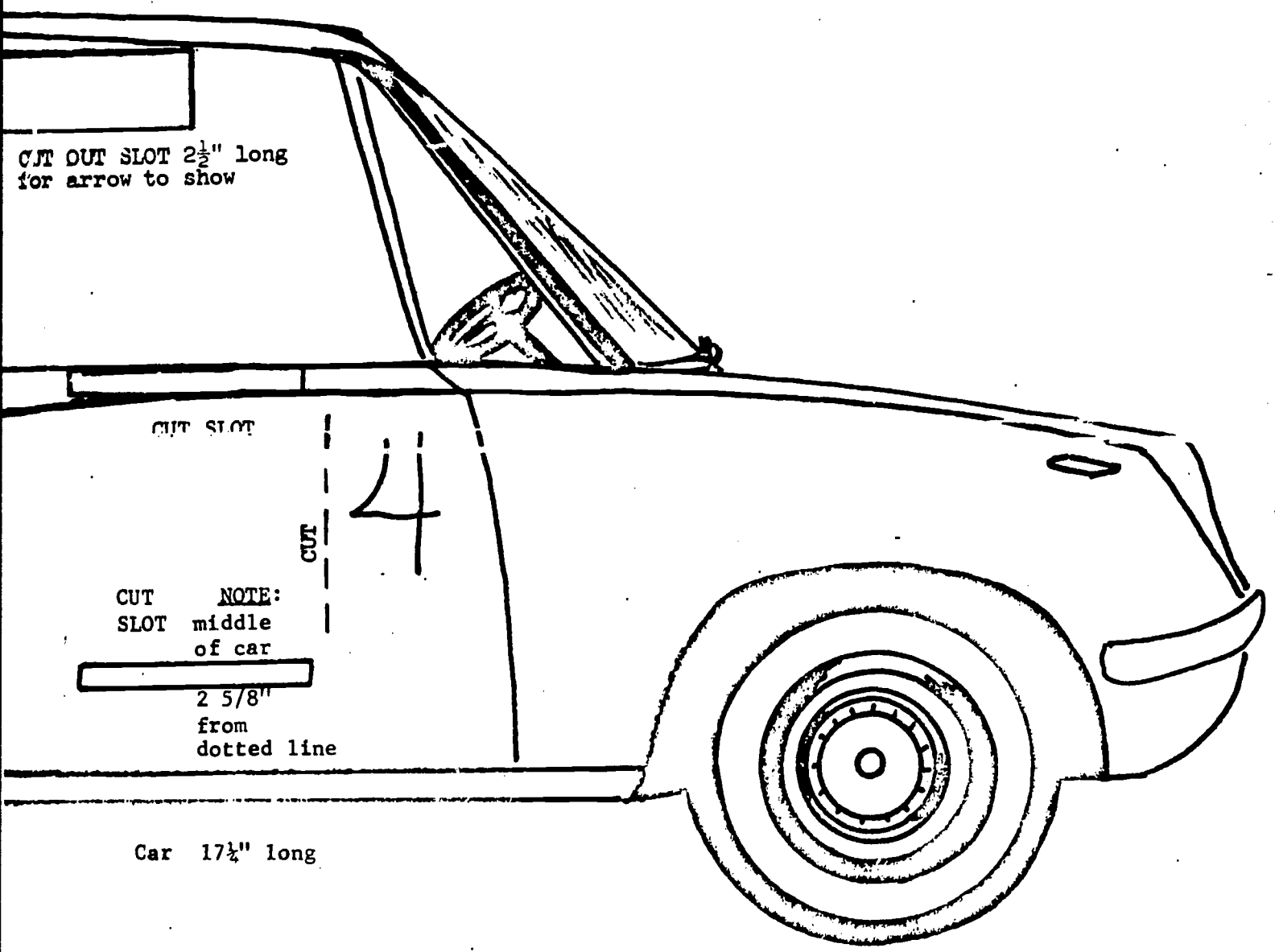
If we don't know what this missing number is, by reversing directions - going the other way - we can find out." The teacher pushes the two-legged slider downward until the sentence reads $\square = 1 + 4$."Now you see the arrow goes the other way, so we read the equation in reverse. We know what 4 + 1 is." Teacher waits for the answer, then removes the blank tab to expose the 5. Slide the slider up and down slowly, several times, so that the child sees the equation written and read in both directions.

The tab can be used over any of the three numerals, one at a time. With the tab placed in the middle, the sentence reads (with the slider up) $5 - \square = 4$. The teacher says, "Let's make it go the other way and see what it says." With the slider down it reads $5 = \square + 4$. Children who have enough skill development to cope with basic number facts will be able to see the principle of equation reversal after several trials.

by

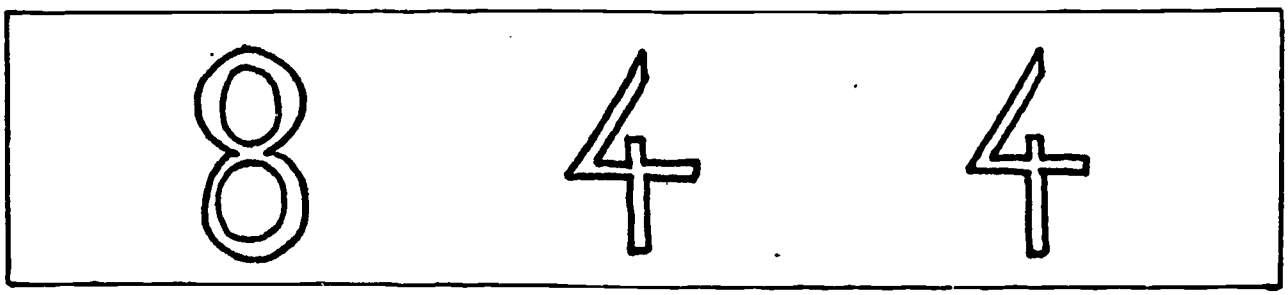
Inez Griffith

Dune Buggy

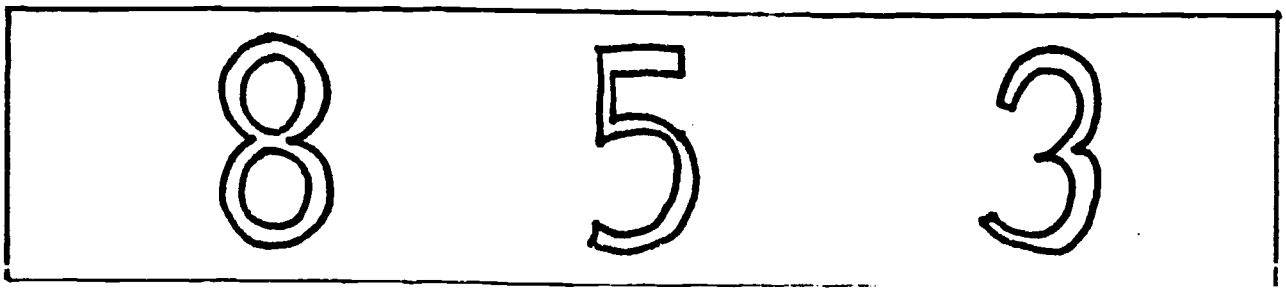


The actual car should be twice this long with an identical front end facing the other direction, joined together. Car should be made of tagboard.

HORIZONTAL SLIDED



A.



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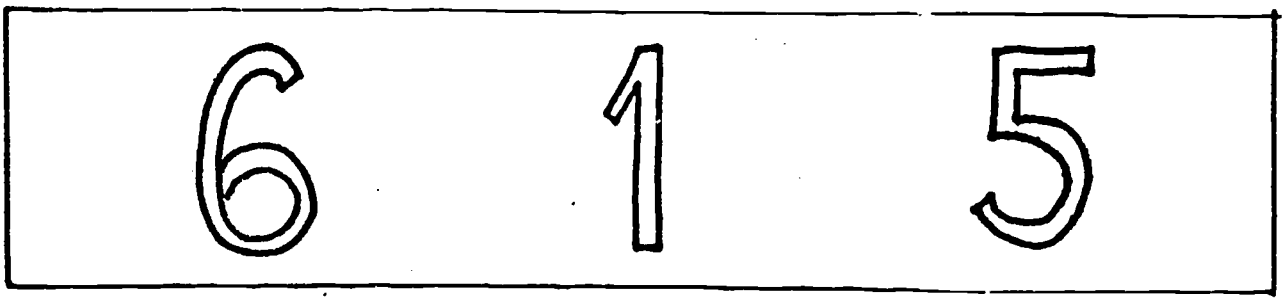
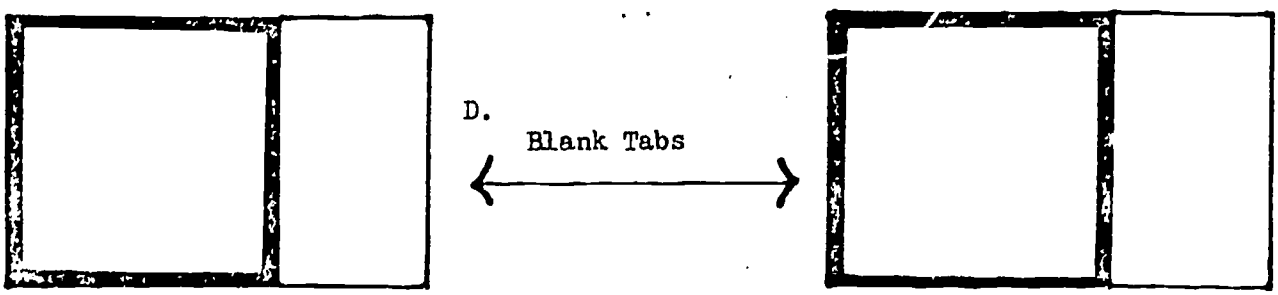
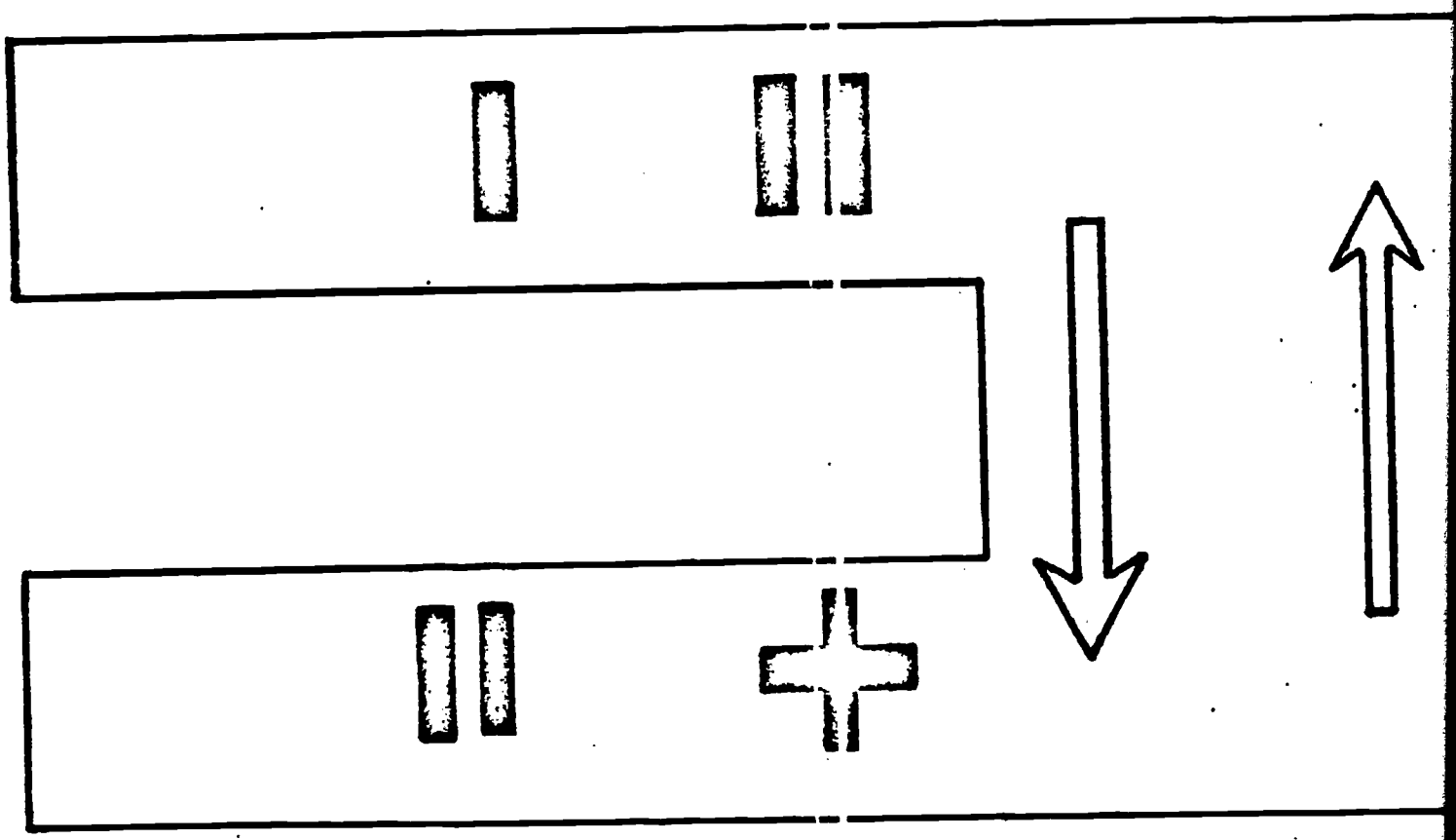


C.



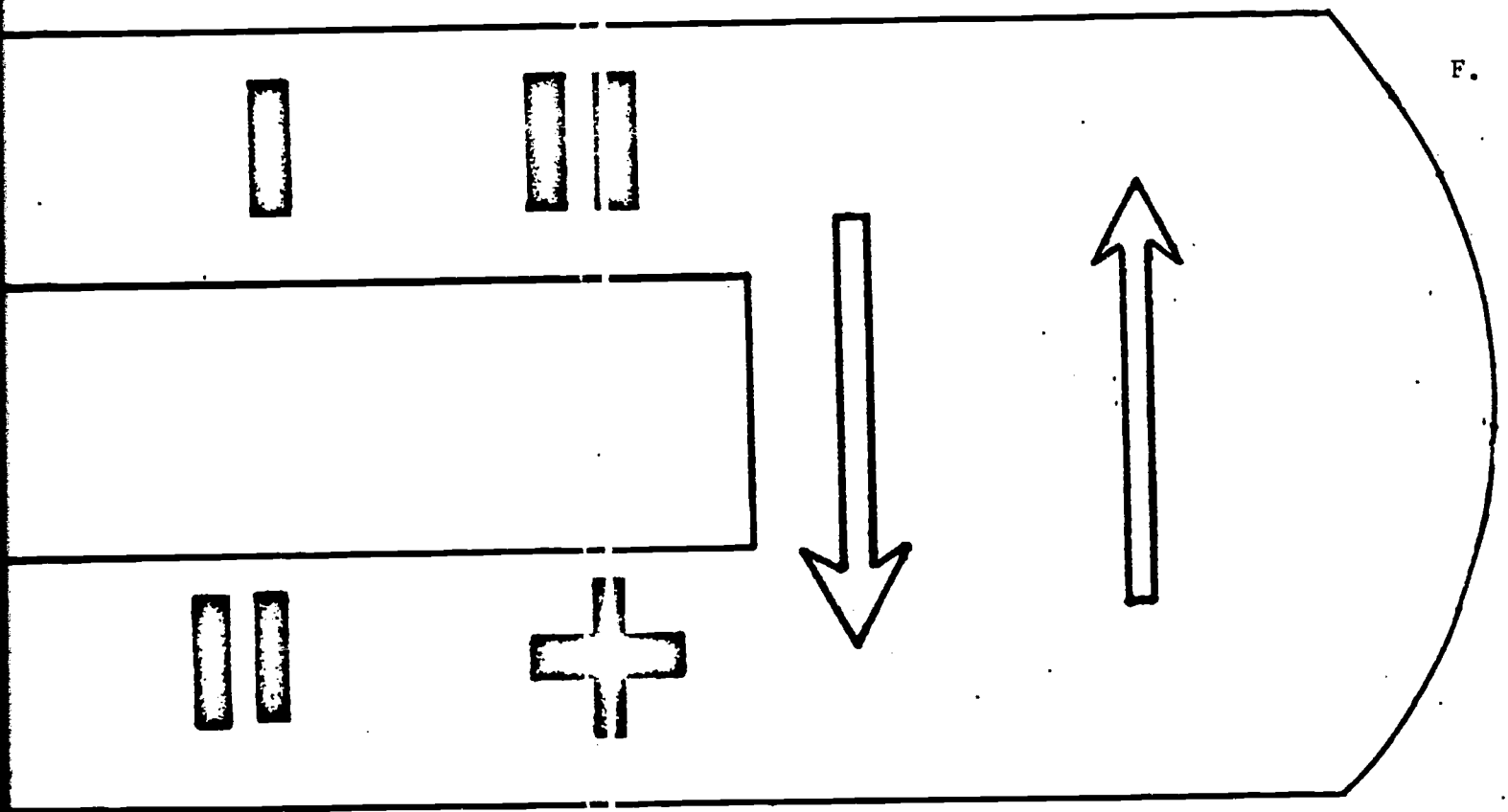
Dune Buggy Parts

NOTE TO TEACHERS: A., B., and C. are all horizantal slides to be inserted in the DUNE BUGGY, a time, to teach the various number combinations. Separate cards are need each combination. D. and E. are Blank Tabs that cover the number that wil answer. F. (Below) in the vertical, two legged slider that changes the ta addition to subtraction.



DUNE BUGGY PARTS

RS: A., B., and C. are all horizantal slides to be inserted in the DUNE BUGGY, one at a time, to teach the various number combinations. Separate cards are needed for each combination. D. and E. are Blank Tabs that cover the number that will be the answer. F. (Below) in the vertical, two legged slider that changes the task from addition to subtraction.



DUNE BUGGY PARTS

10

This is a curriculum modification sequence for measuring with a ruler from one to six inches. Each a jump of 10 pages in the sequence. Rulers may be used by the child to help determine the measure sequence may be used with plastic overlays and red, green, and blue grease pencils. It can easily for additional reinforcement.

Circle in red another line that is 1 in

by

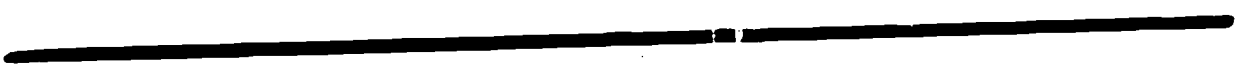
modification sequence for measuring with a ruler from one to six inches. Each paper represents
n the sequence. Rulers may be used by the child to help determine the measurements. This
with plastic overlays and red, green, and blue grease pencils. It can easily be programmed
orcement.

red another line that is 1 inch long.

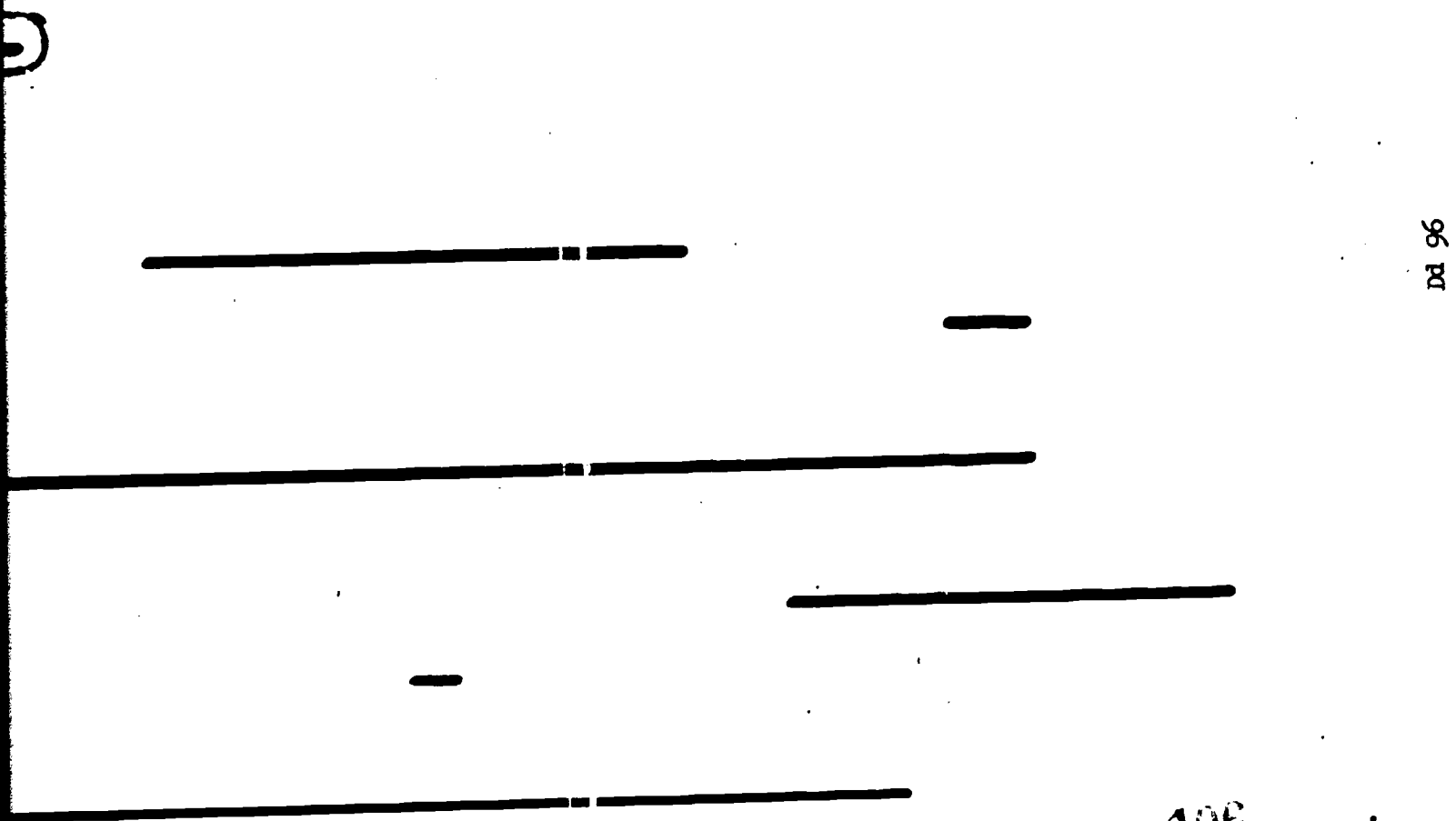
De 95

by
Ruth A. Olson

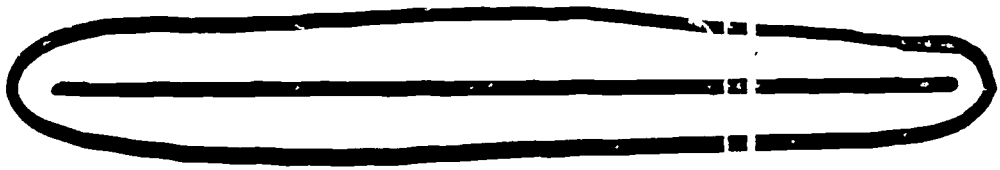
Circle in green any lines shorter than



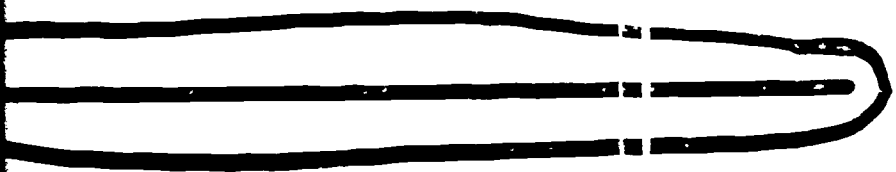
green any lines shorter than 1 inch.



Circle in blue any lines longer than 1 inch



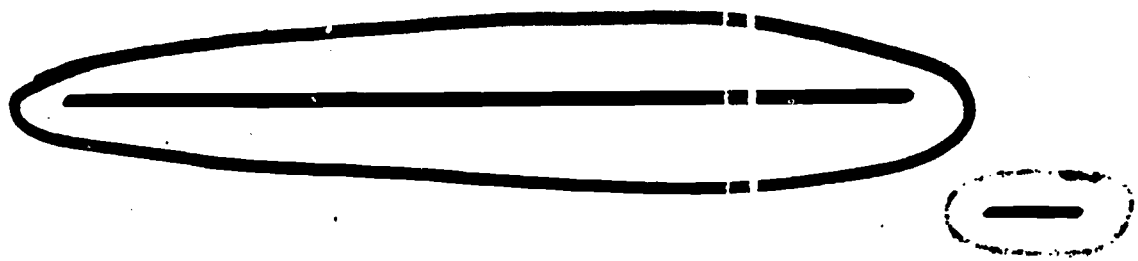
blue any lines longer than 1 inch.



De 97

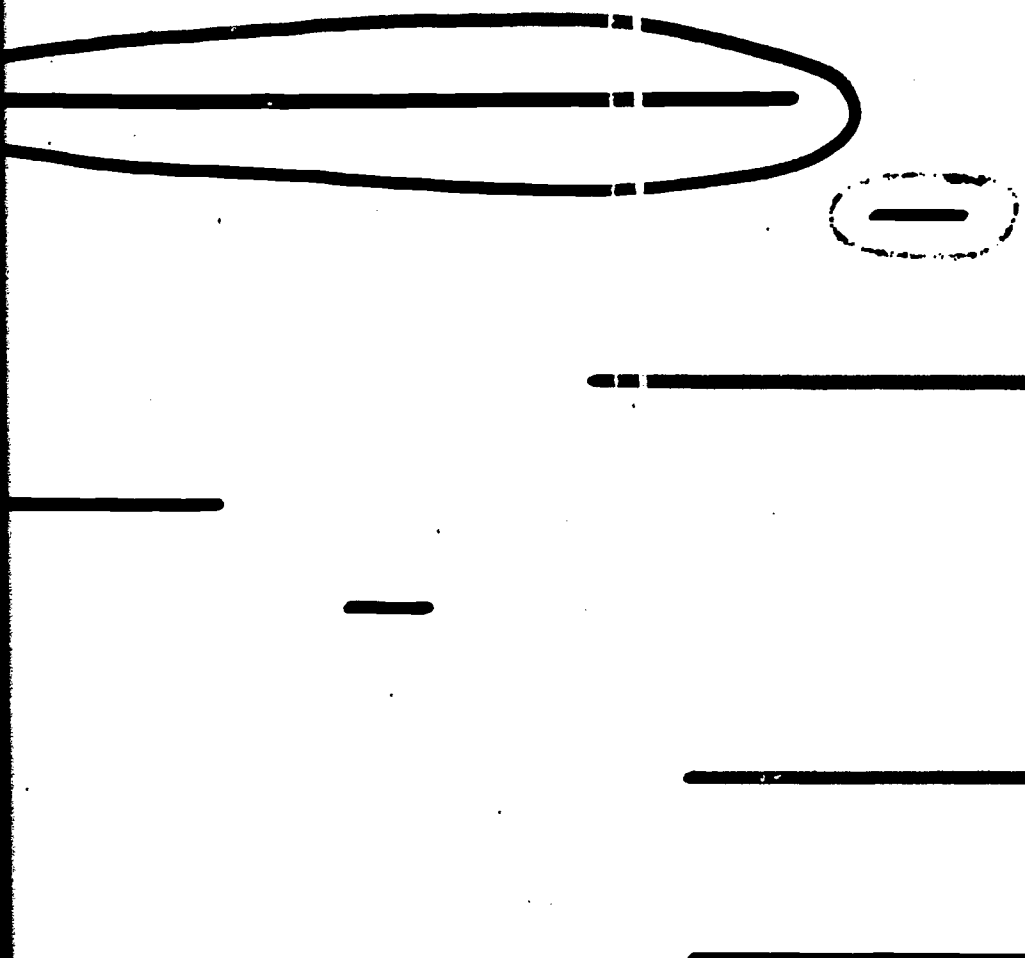
Circle in blue any lines longer than 1 inch.

Circle in green any lines shorter than 1 inch.



blue any lines longer than 1 inch.

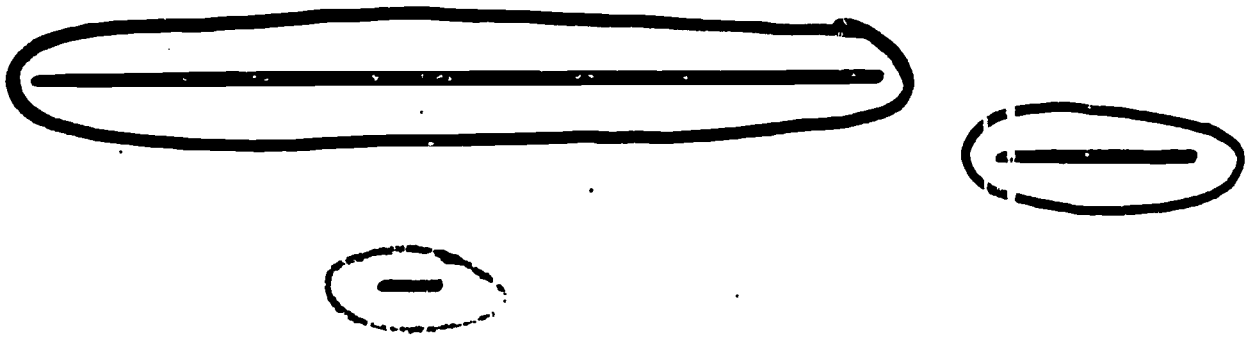
green any lines shorter than 1 inch.



Circle in blue any lines longer than 1

Circle in green any lines shorter than 1

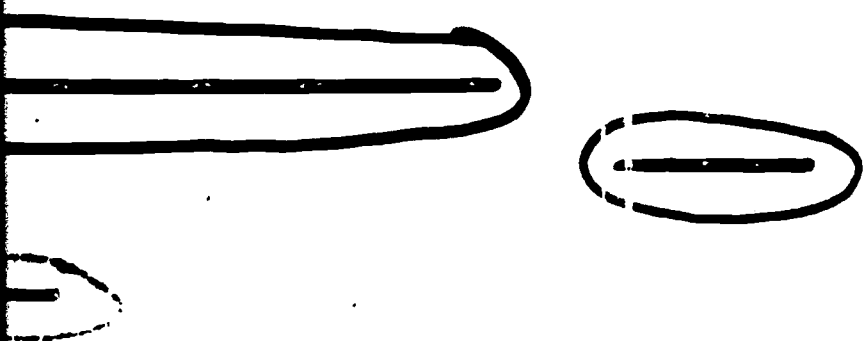
Circle in red any lines 1 inch long.



blue any lines longer than 1 inch.

green any lines shorter than 1 inch.

red any lines 1 inch long.



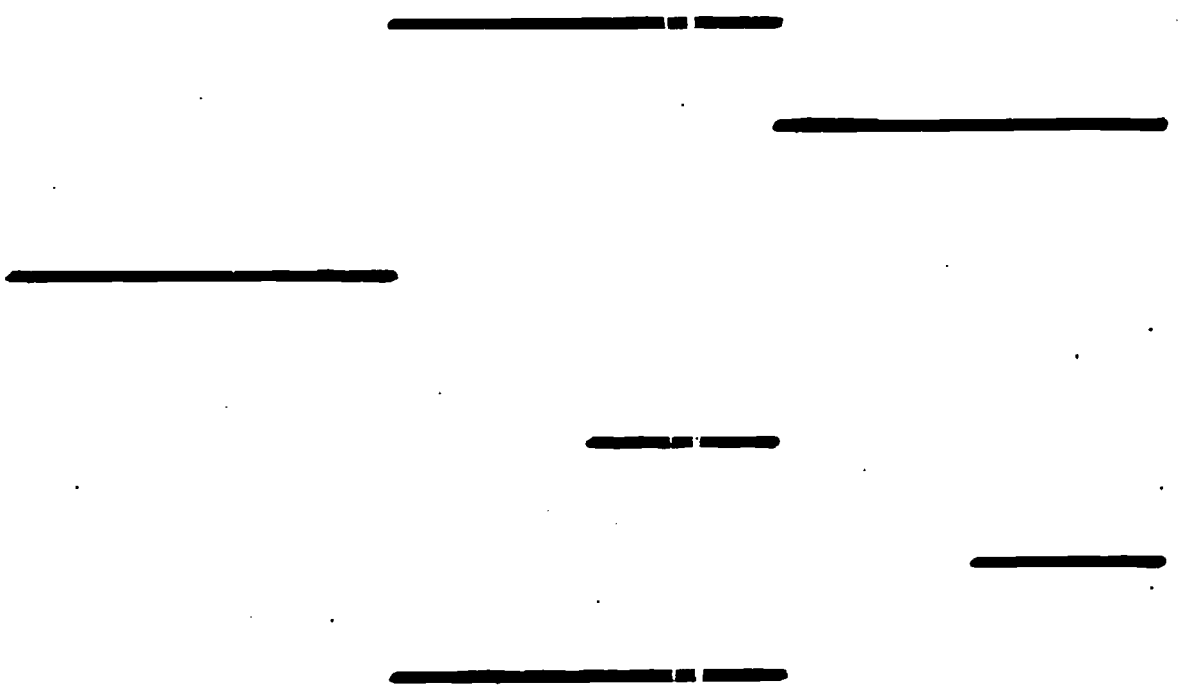
De 99

Circle in red and label any lines 1 inch lon

Circle in red and label any lines 2 inches l

1 inch

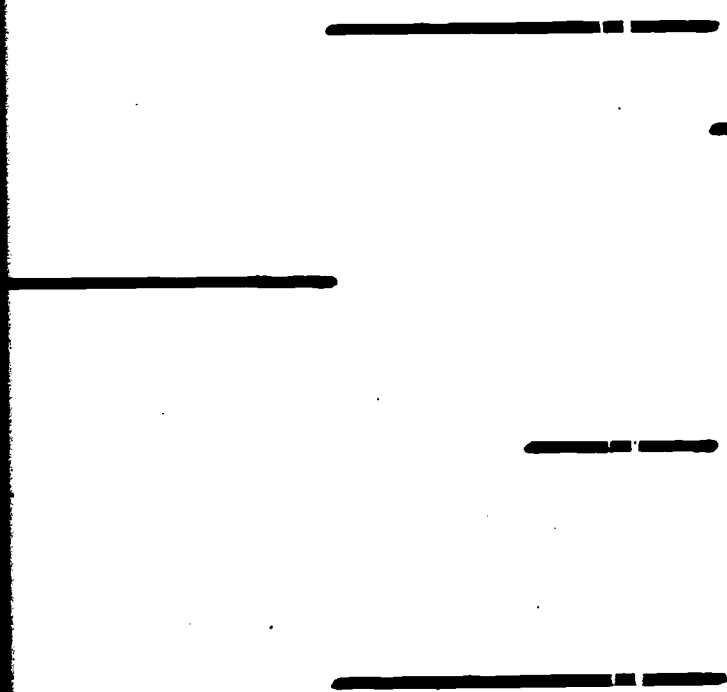
2 inches



ed and label any lines 1 inch long.

ed and label any lines 2 inches long.

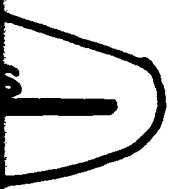
2 inches

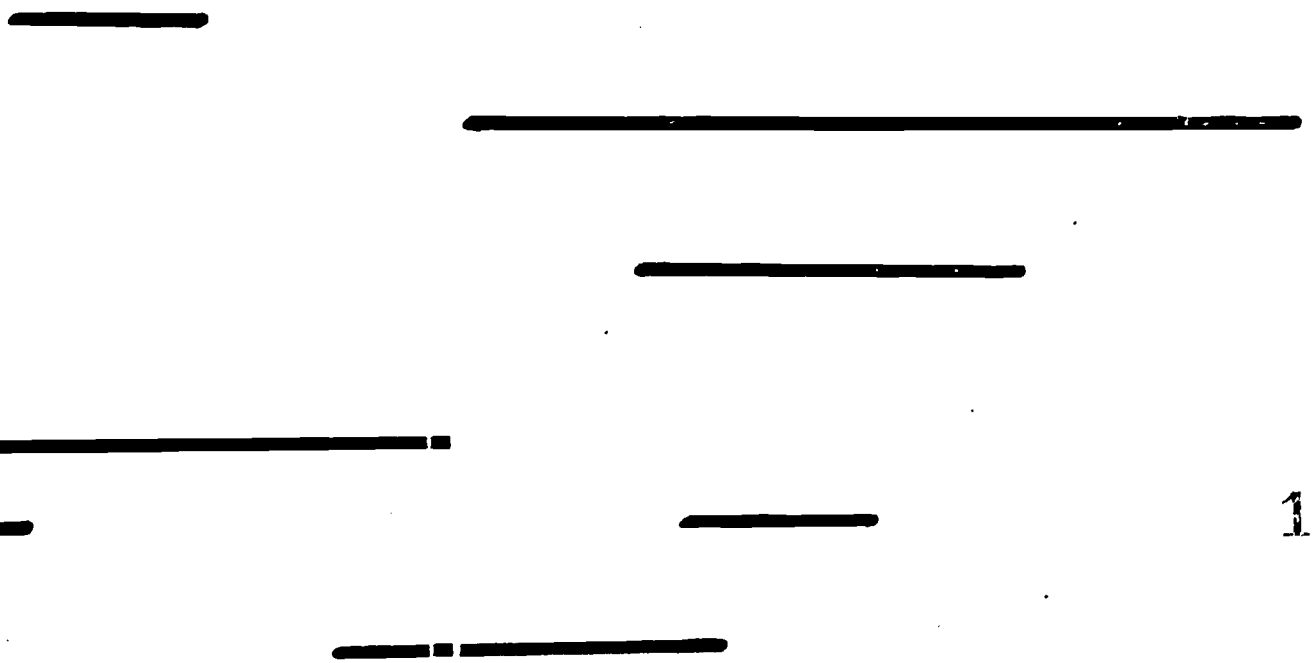


De 100

Circle in red and label any lines 2 inche

n red and label any lines 2 inches long.

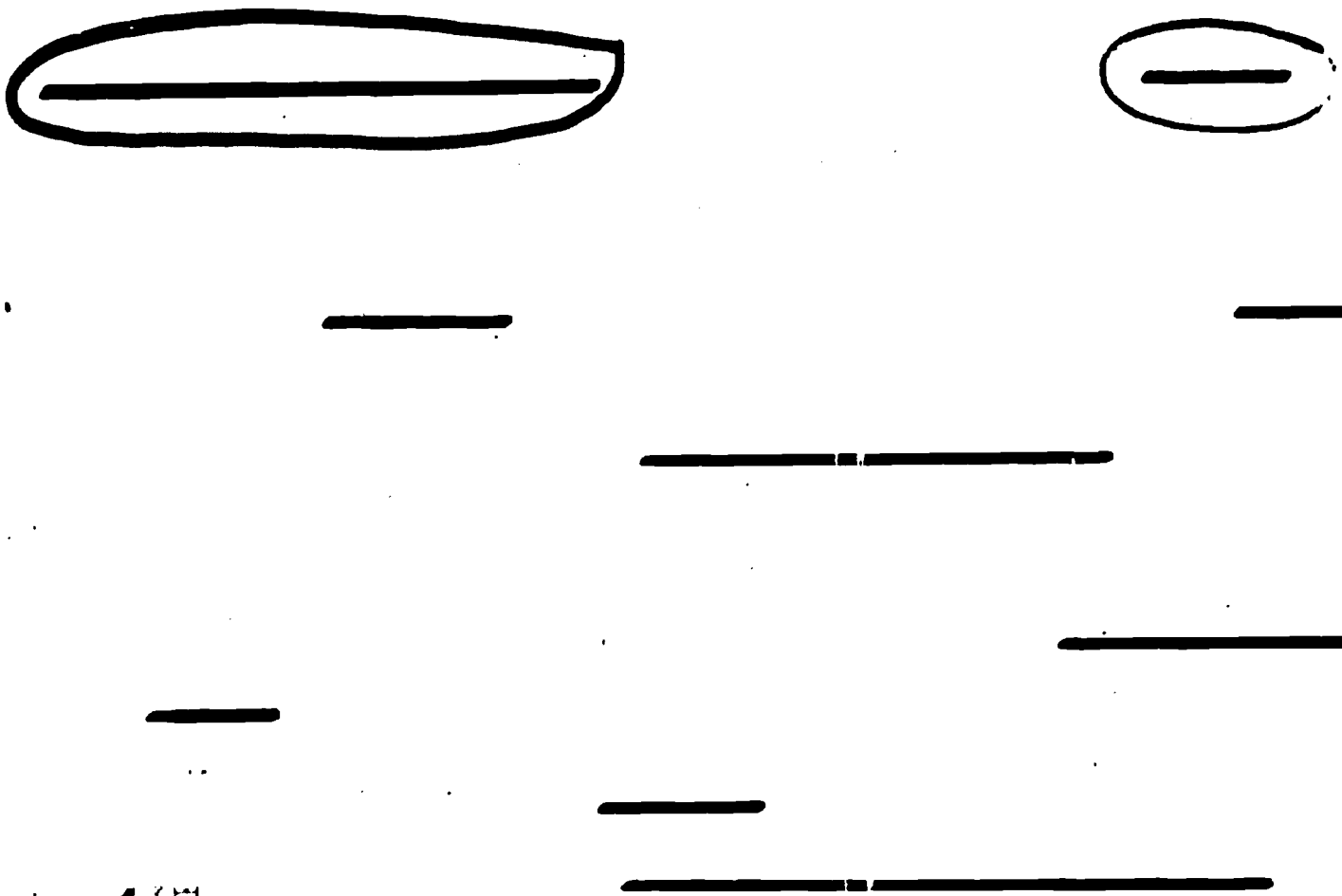




De 101

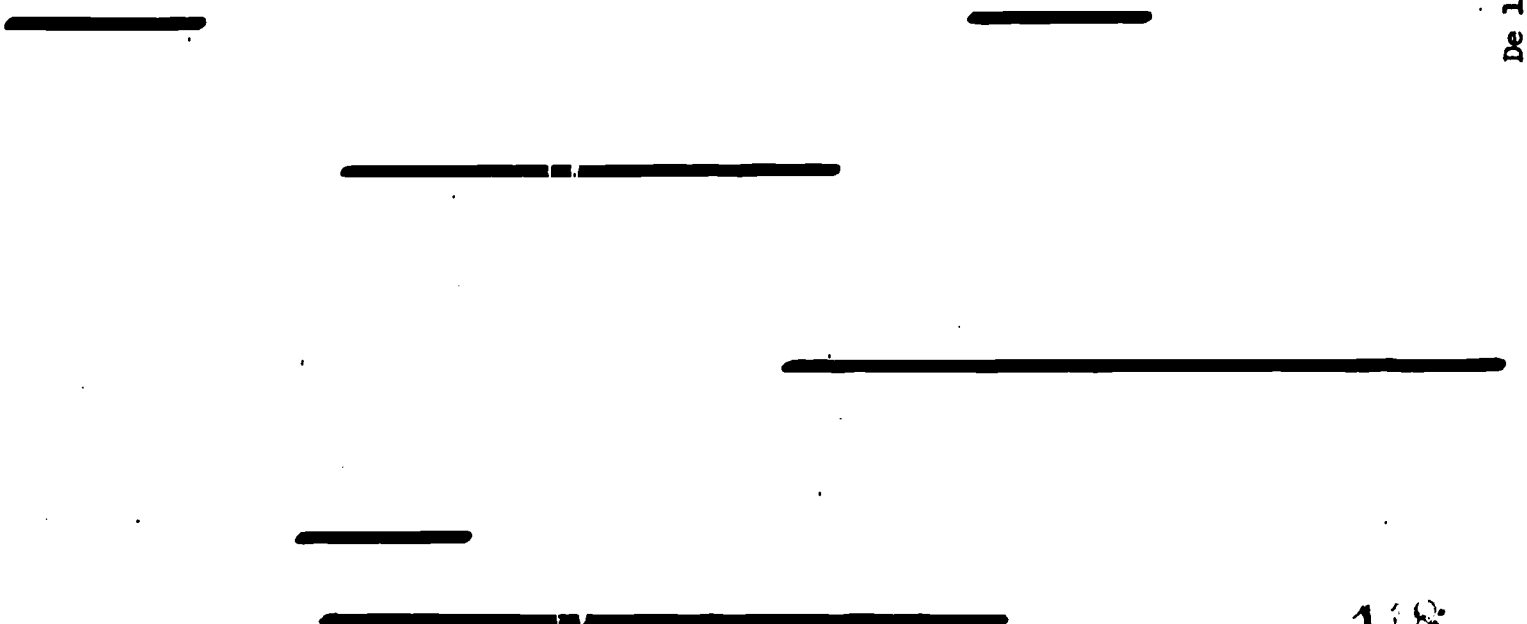
Circle in blue any lines longer than 2 inc

Circle in green any lines shorter than 2 inch



n blue any lines longer than 2 inches.

n green any lines shorter than 2 inches

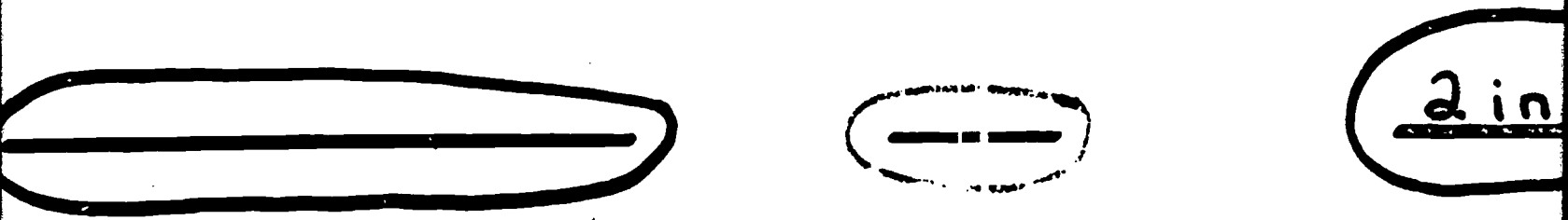


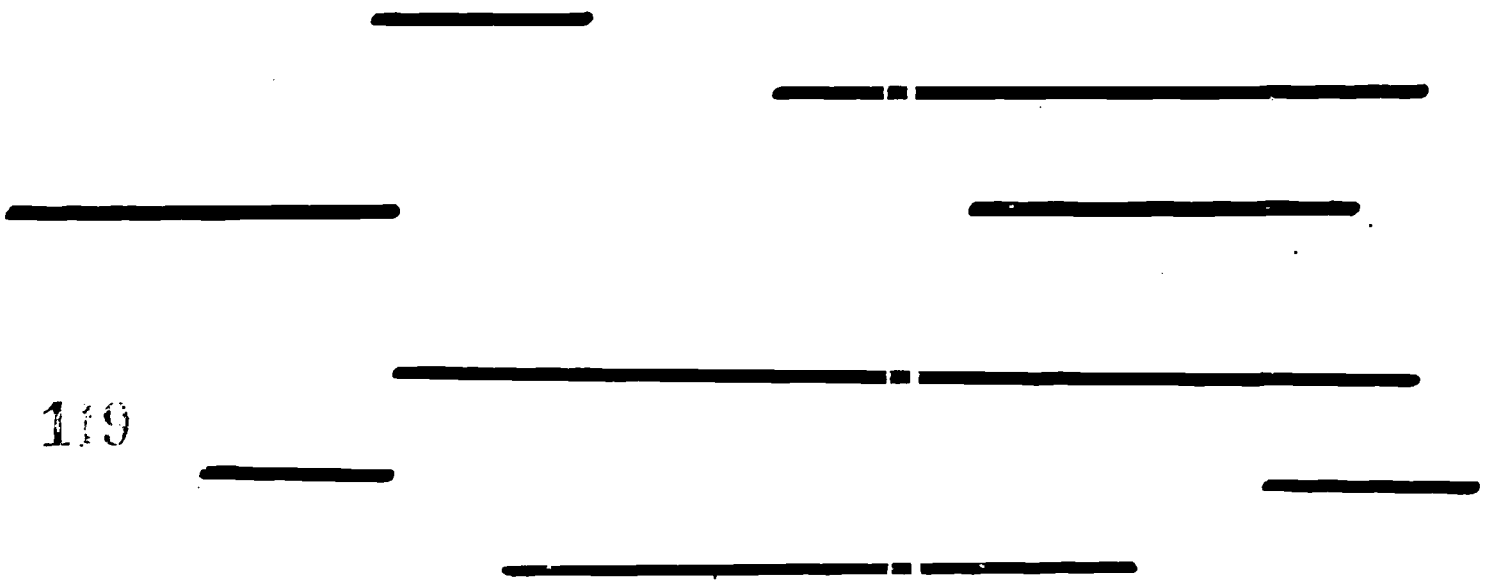
De 102

Circle in blue any lines longer than 2

Circle in green any lines shorter than 2

Circle in red and label any lines 2 inches lo

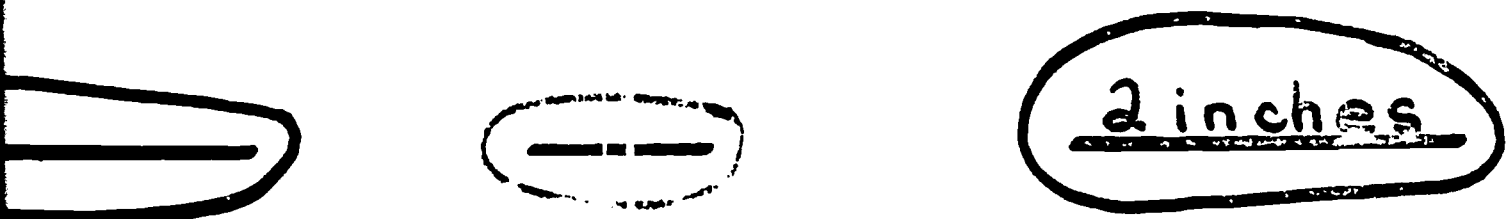


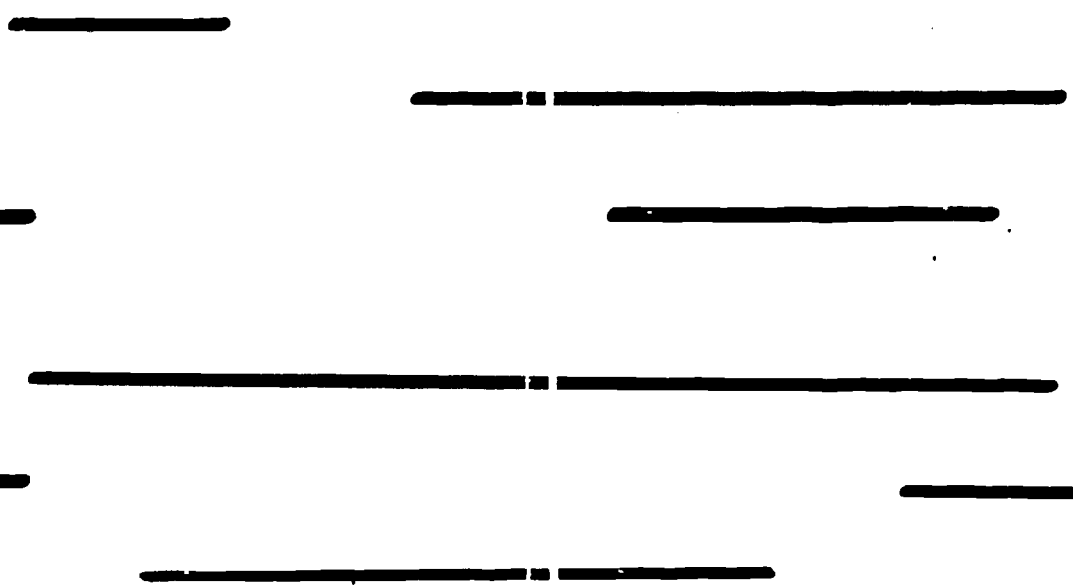


blue any lines longer than 2 inches.

green any lines shorter than 2 inches.

red and label any lines 2 inches long.

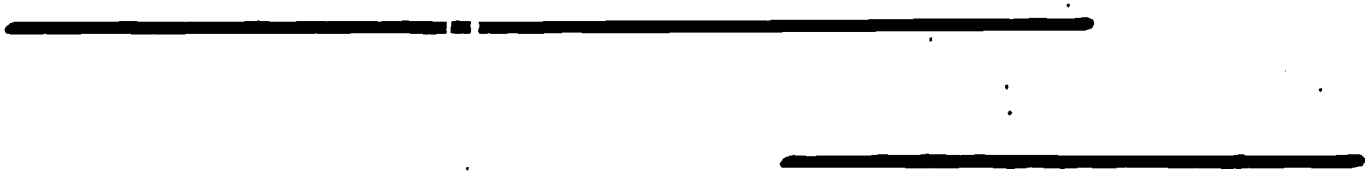




De 103

Circle in red and label any lines 3inches lo

red and label any lines 3 inches long.

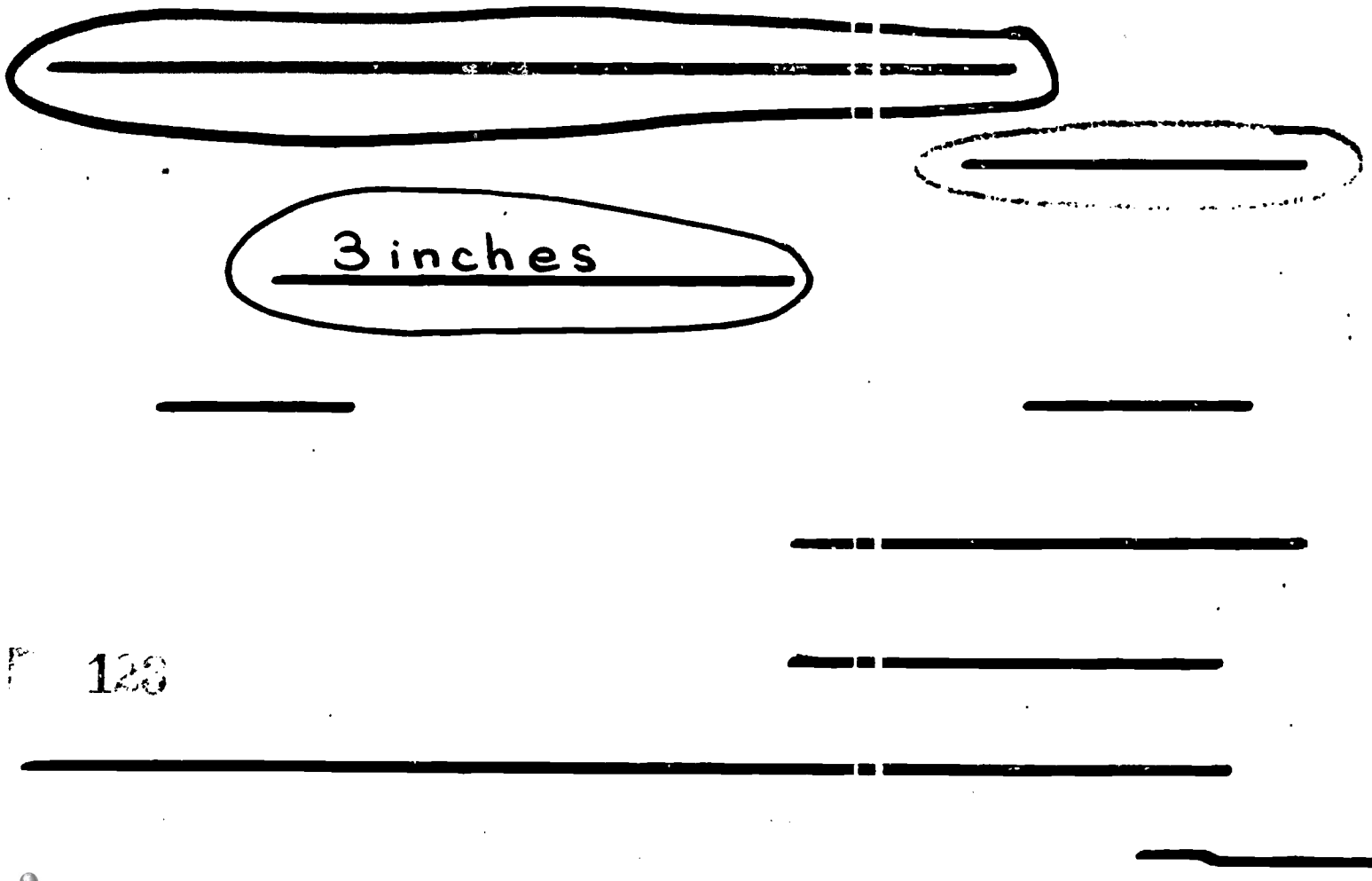


De 104

Circle in blue any lines longer than 3 inches

Circle in green any lines shorter than 3 inche

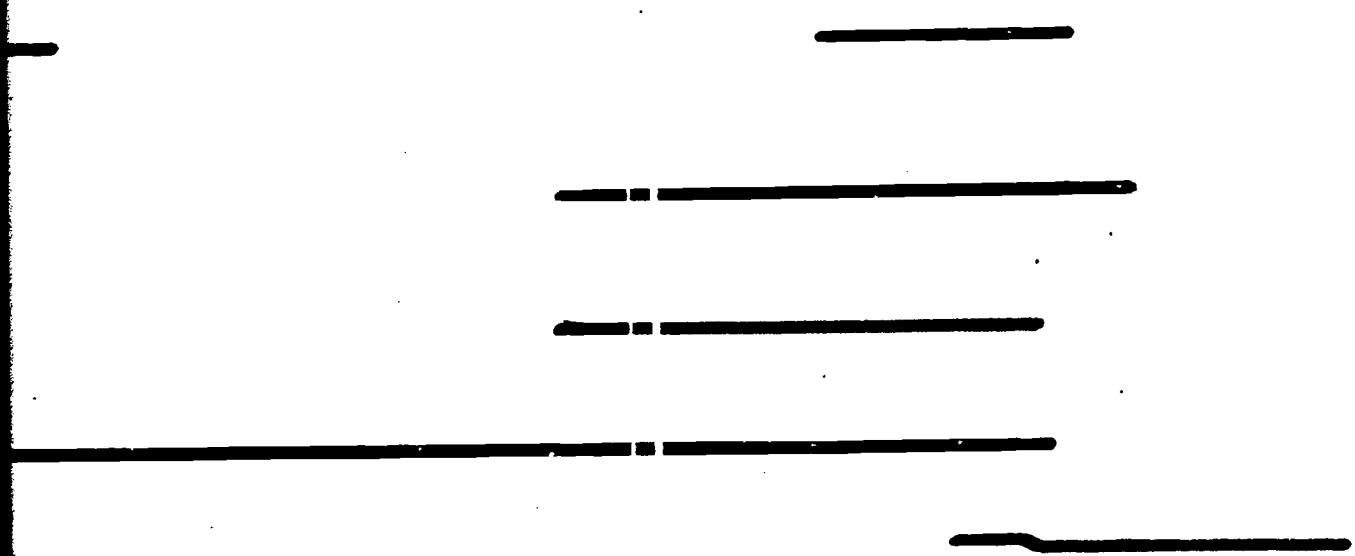
Circle in red and label any lines 3 inches lon



blue any lines longer than 3 inches long.

green any lines shorter than 3 inches long.

red and label any lines 3 inches long.

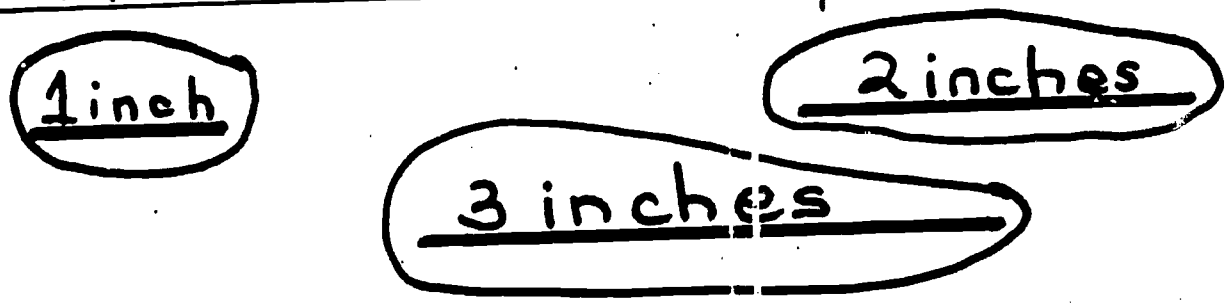


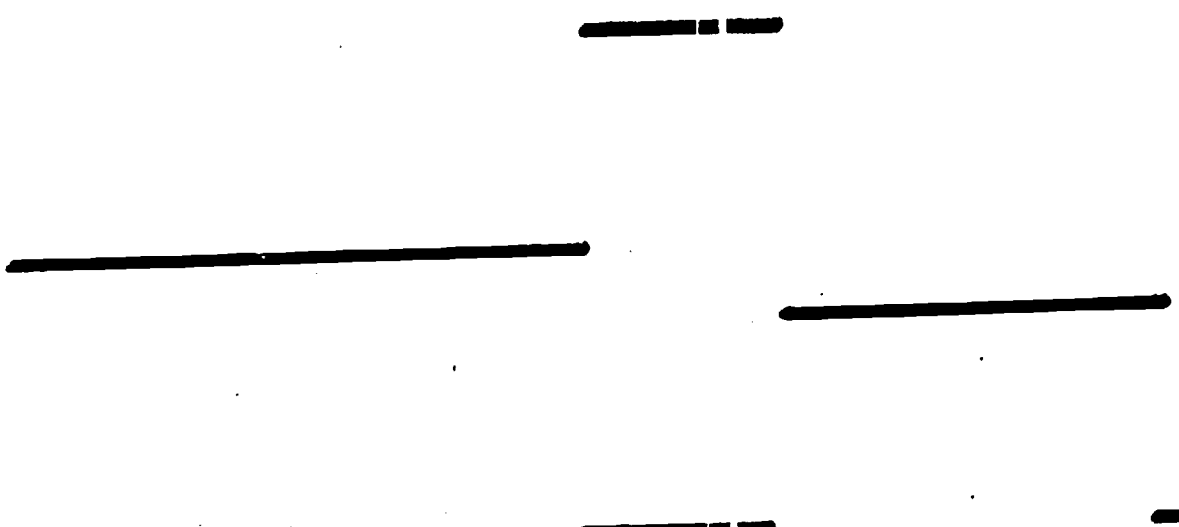
De 105

Circle in red and label any lines 1 inch la

Circle in red and label any lines 2 inches

Circle in red and label any lines 3 inches

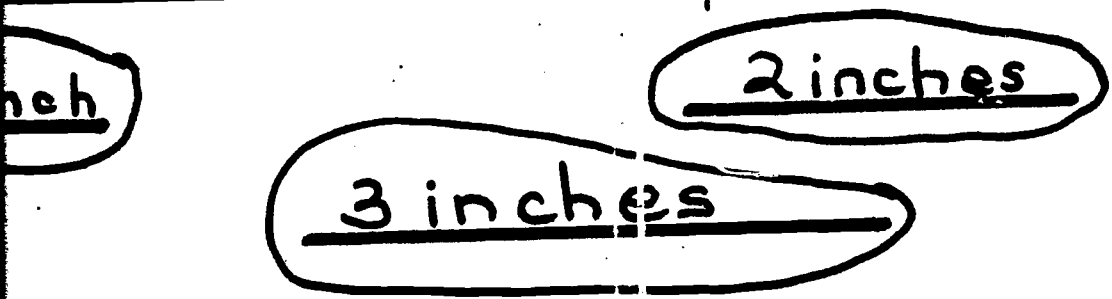




red and label any lines 1 inch long.

red and label any lines 2 inches long.

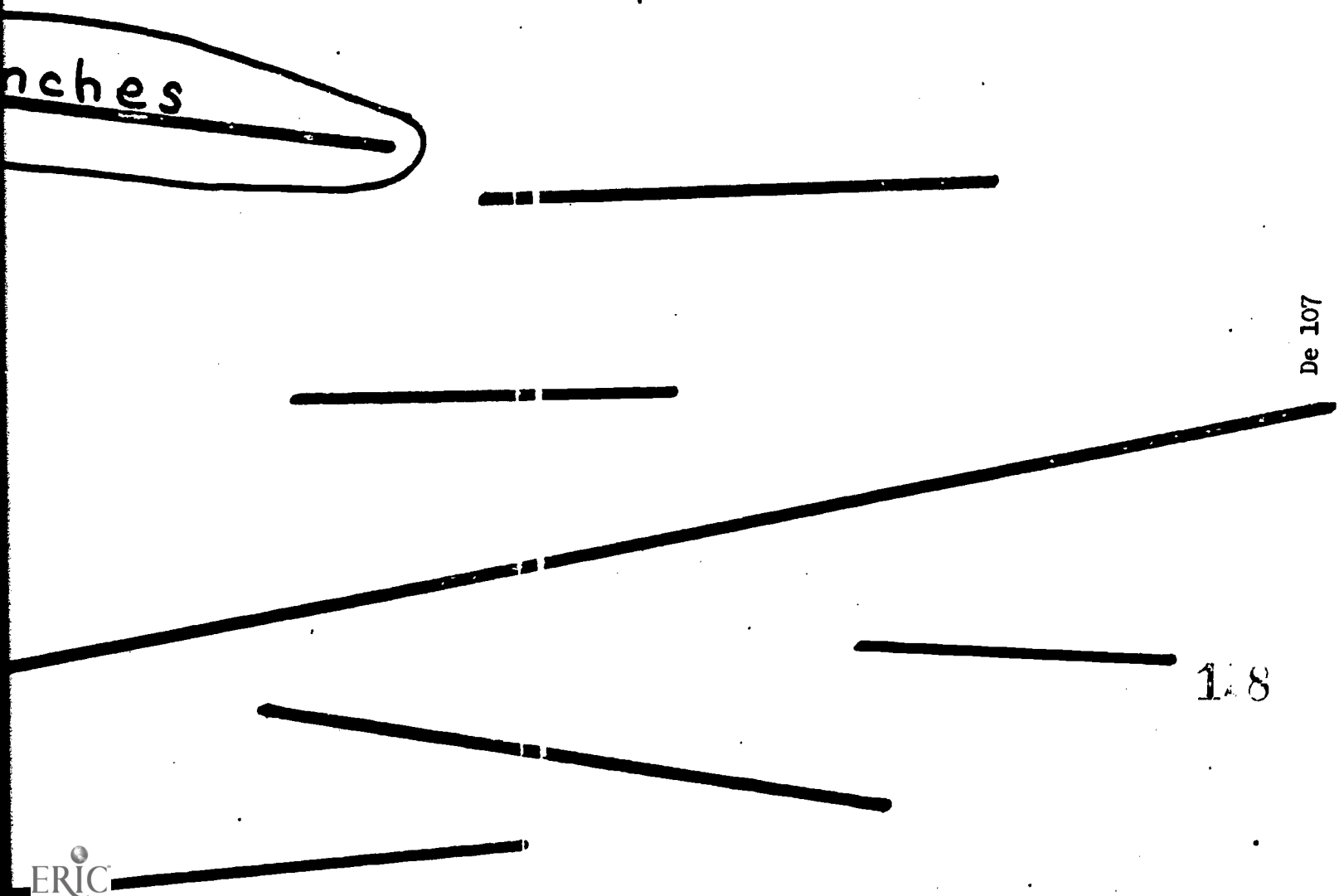
red and label any lines 3 inches long



Circle in red and label any lines 4inch

n red and label any lines 4inches long.

nches

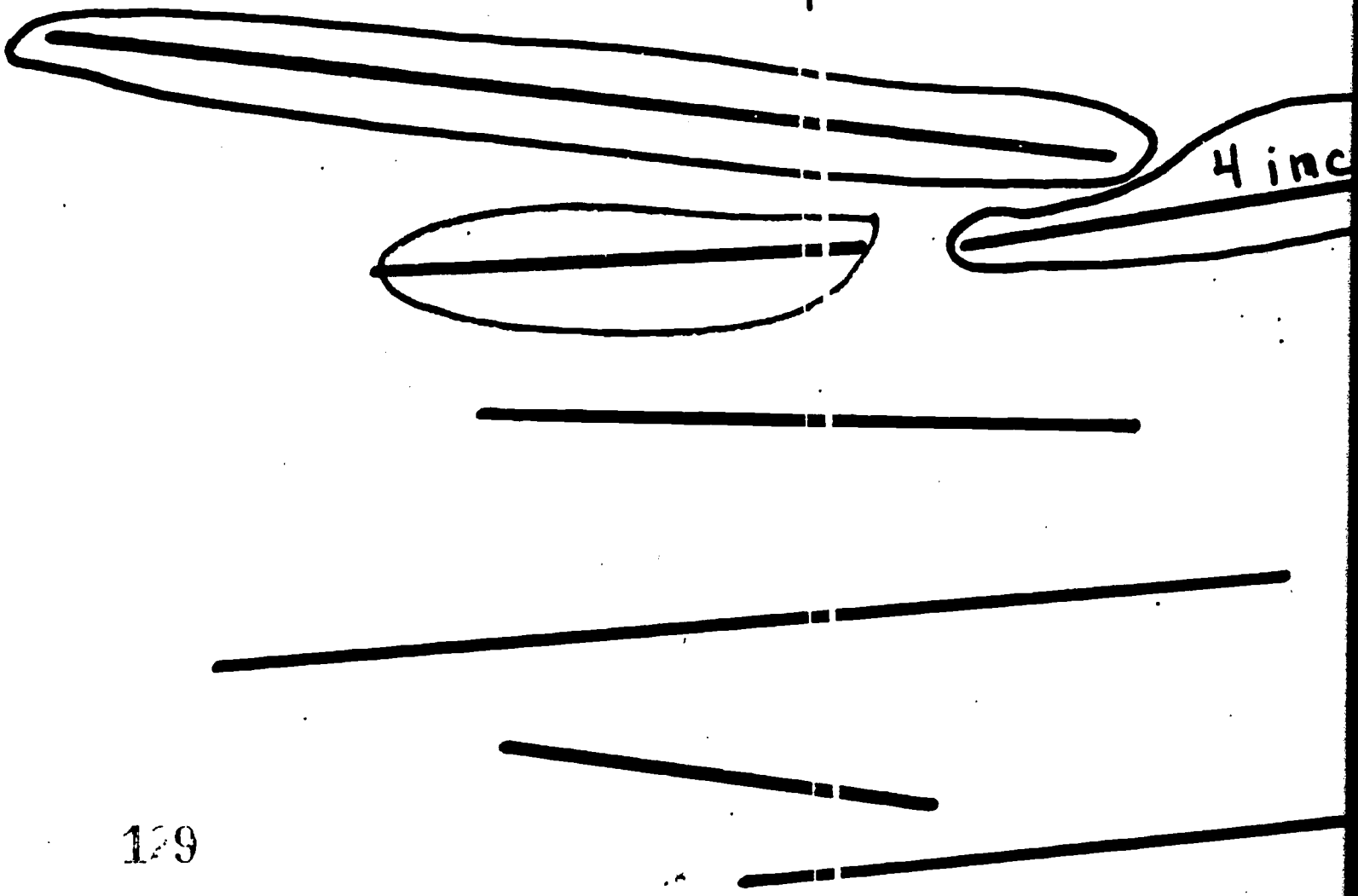


De 107

Circle in blue any lines longer than 4

Circle in green any lines shorter than 4

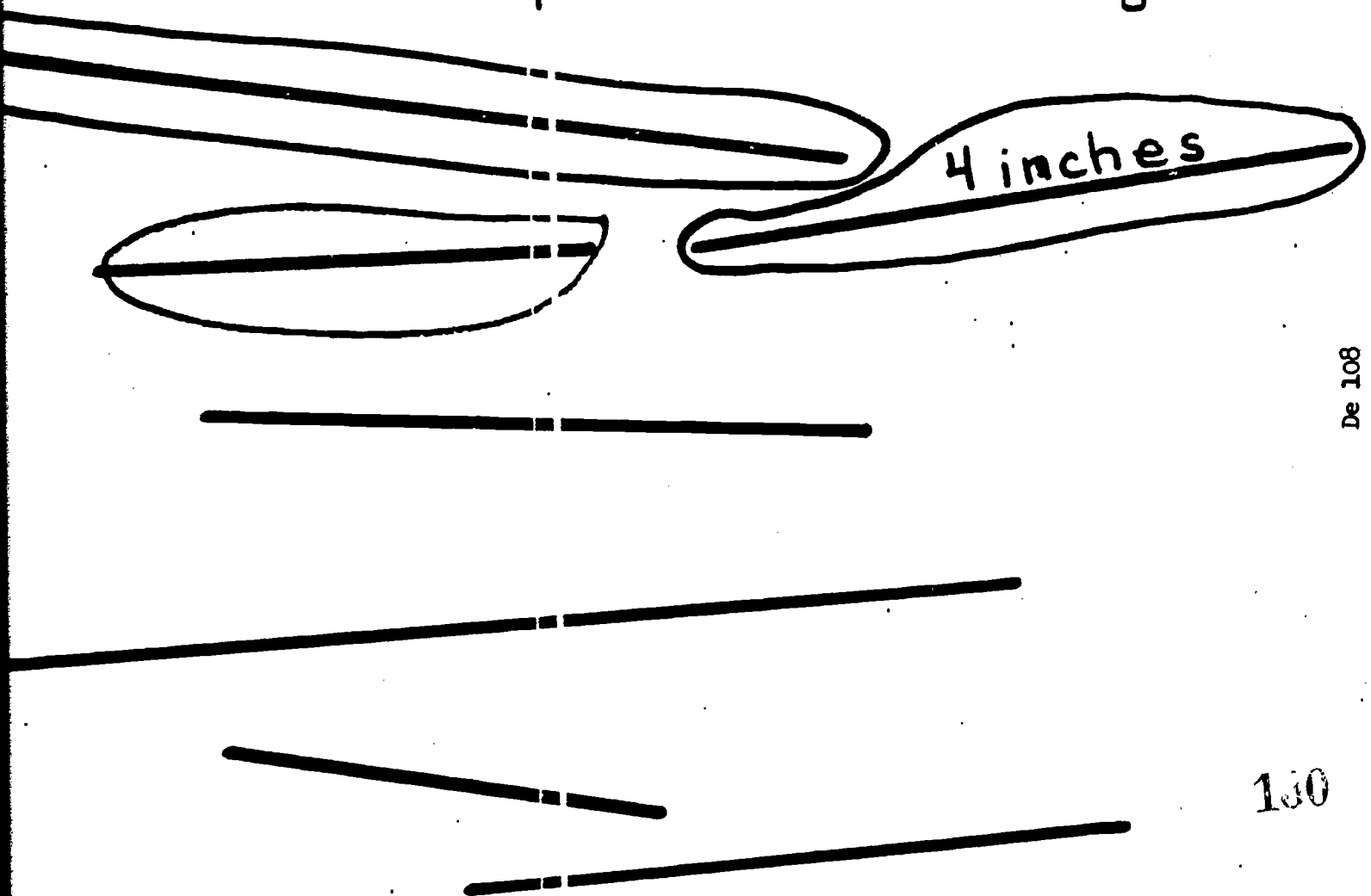
Circle in red and label any lines 4 inches lo



blue any lines longer than 4 inches.

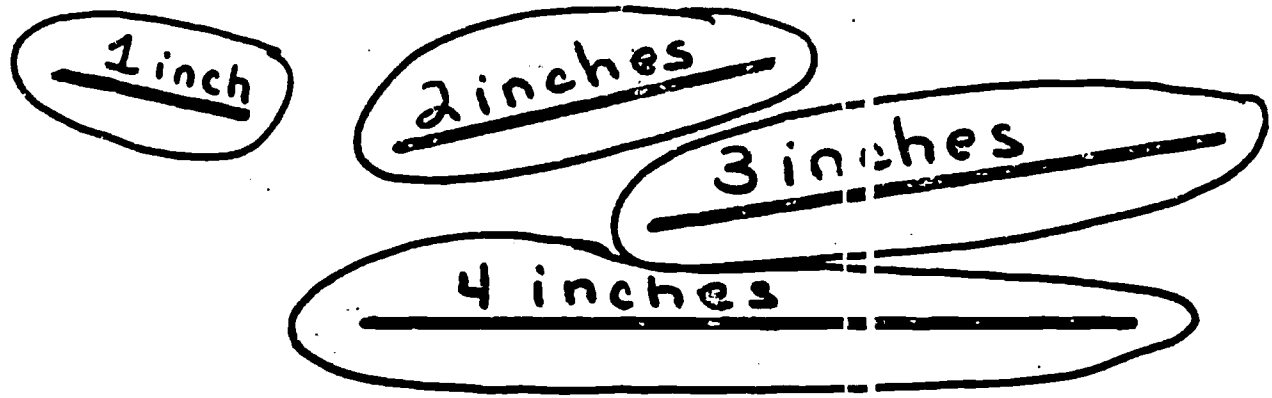
green any lines shorter than 4 inches

red and label any lines 4 inches long.



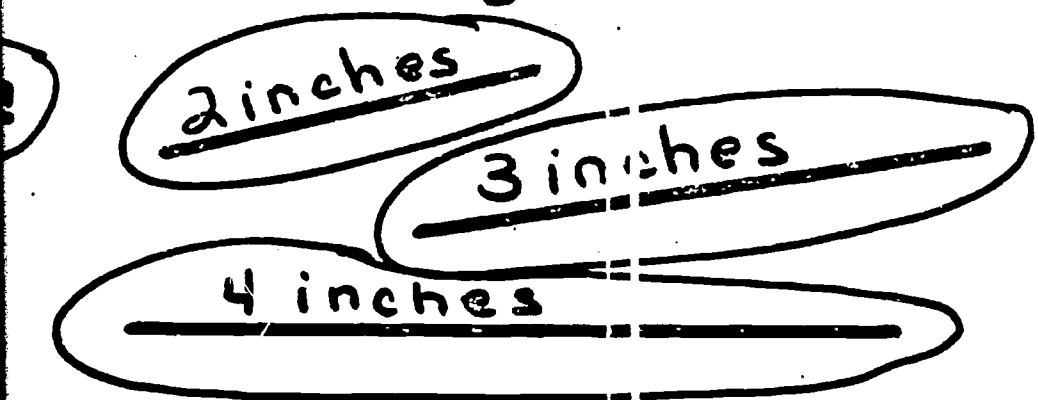
De 108

Circle in red and label any lines 1 inch, 3 inches or 4 inches long.

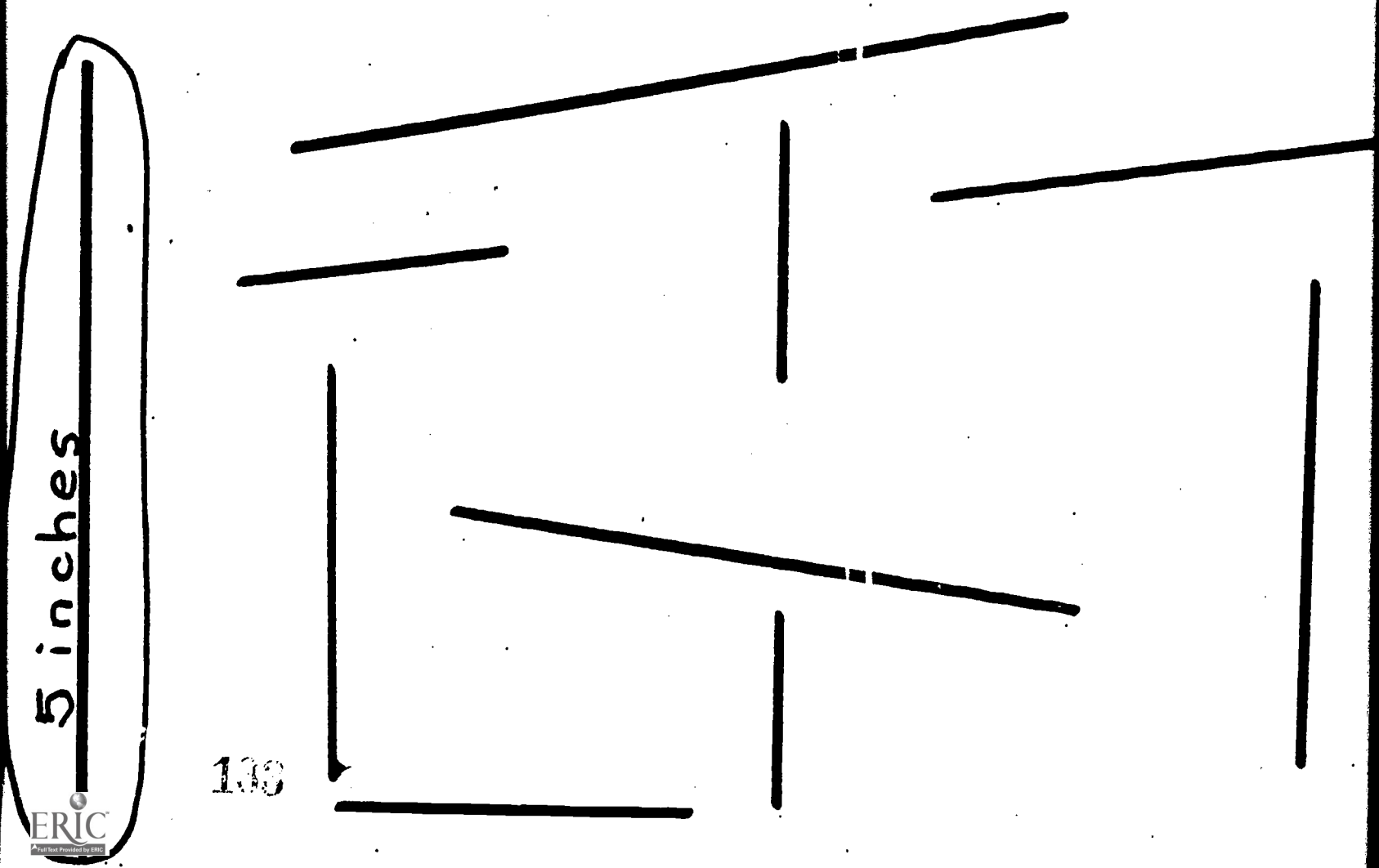


red and label any lines 1 inch, 2 inches,

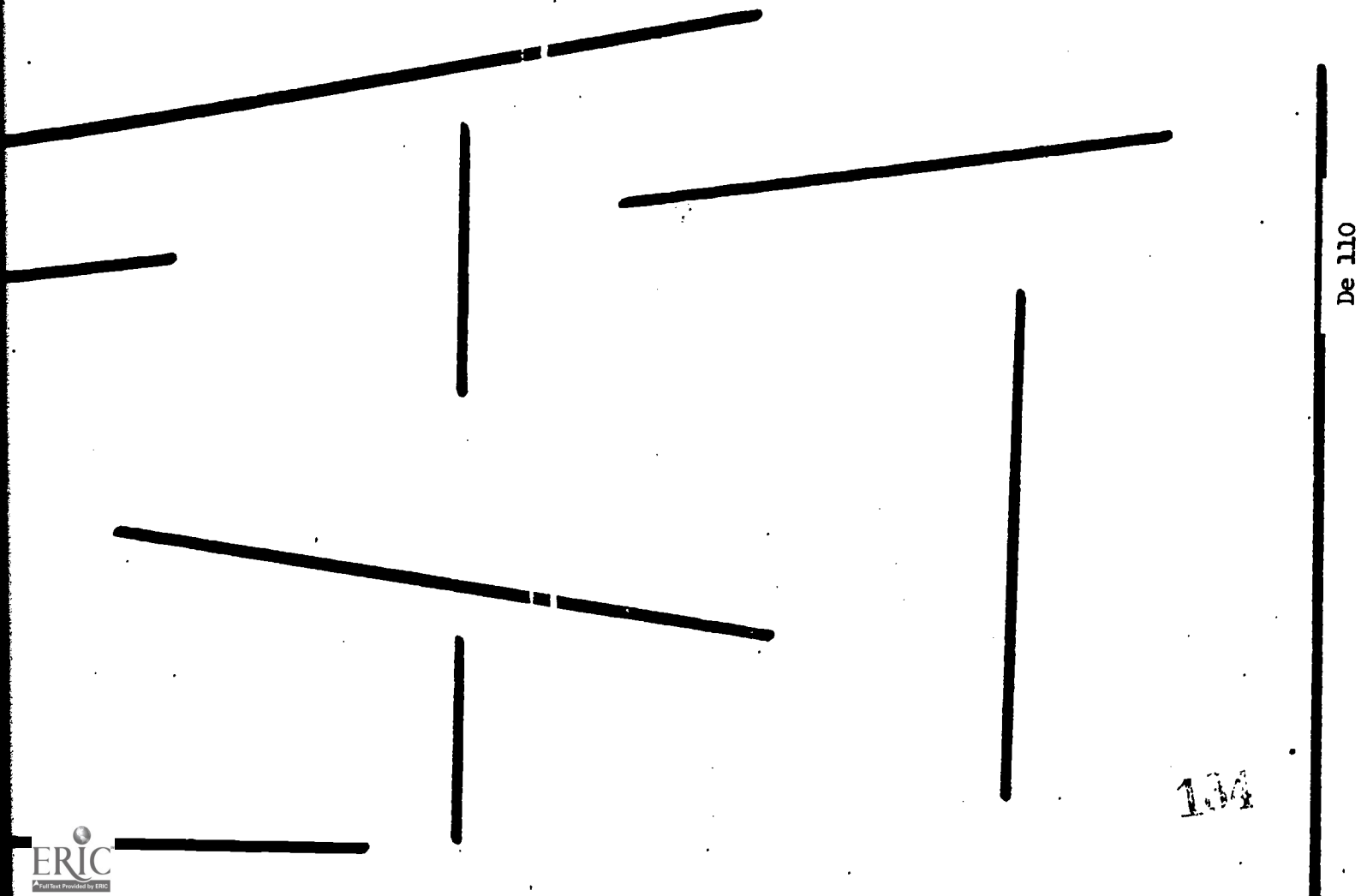
or 4 inches long.



Circle in red and label any lines 5 inches



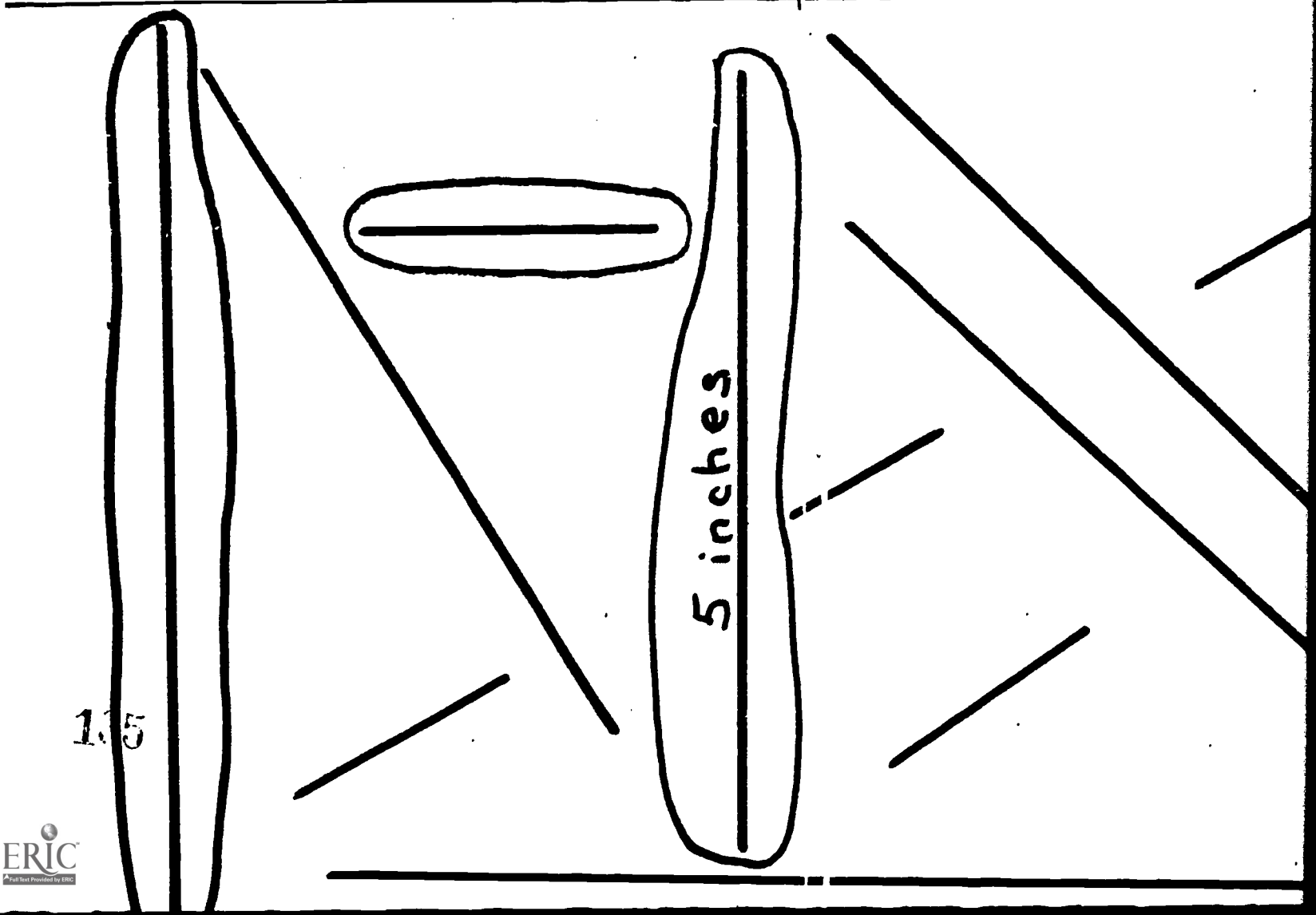
red and label any lines 5 inches long.



Circle in blue any lines longer than 5 inch

Circle in green any lines shorter than 5 inch

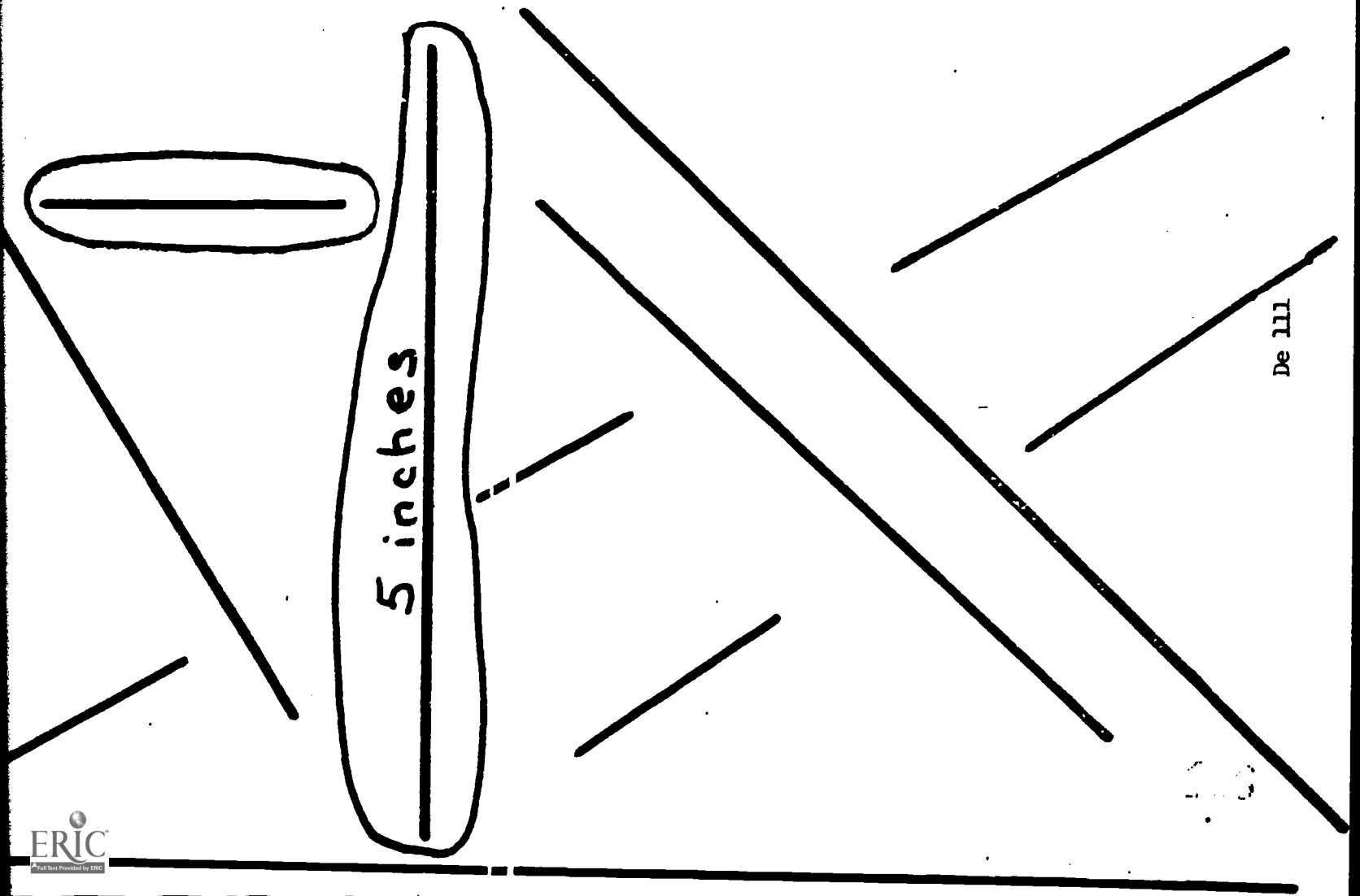
Circle in red and label any lines 5 inches lon



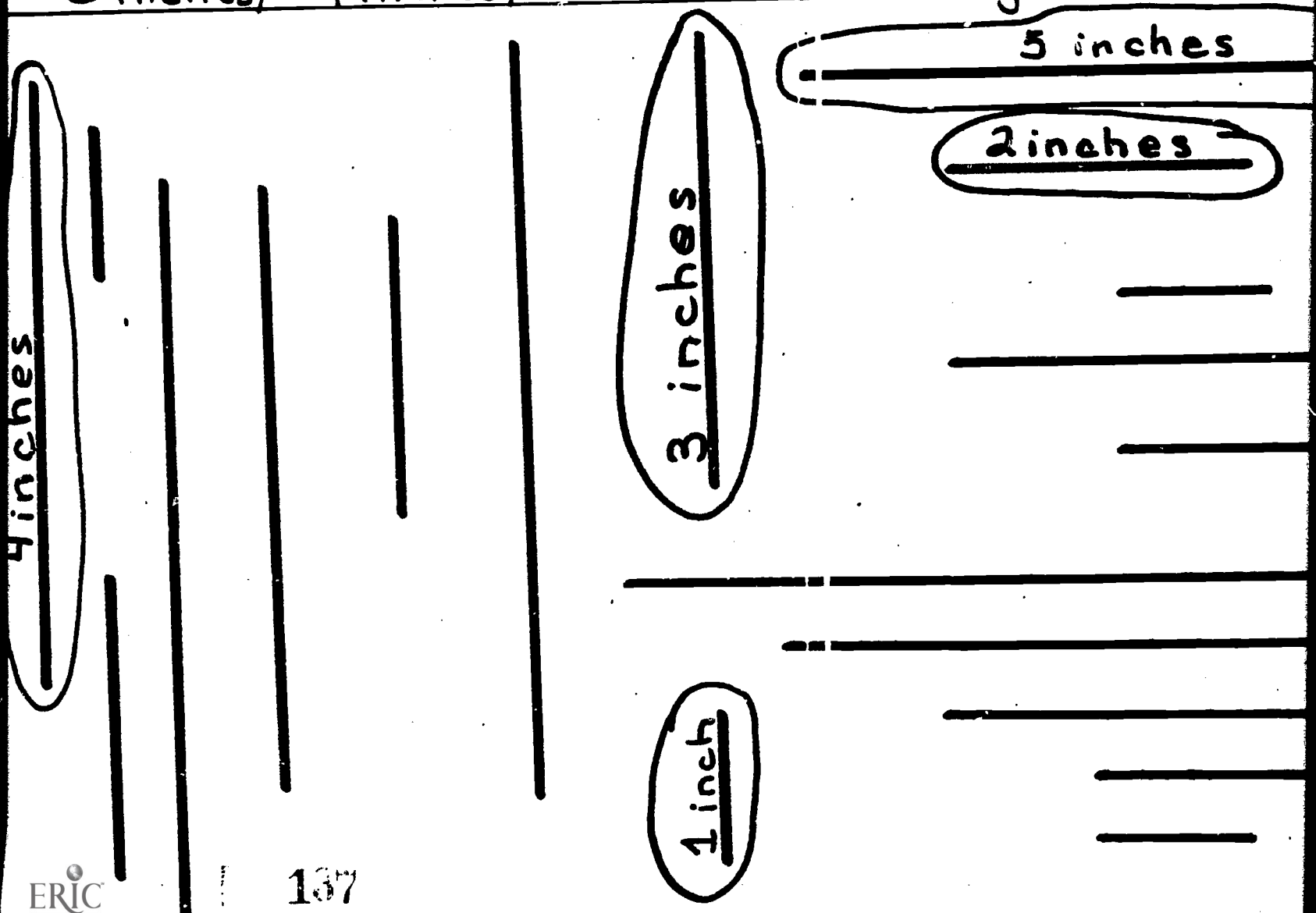
blue any lines longer than 5 inches.

green any lines shorter than 5 inches.

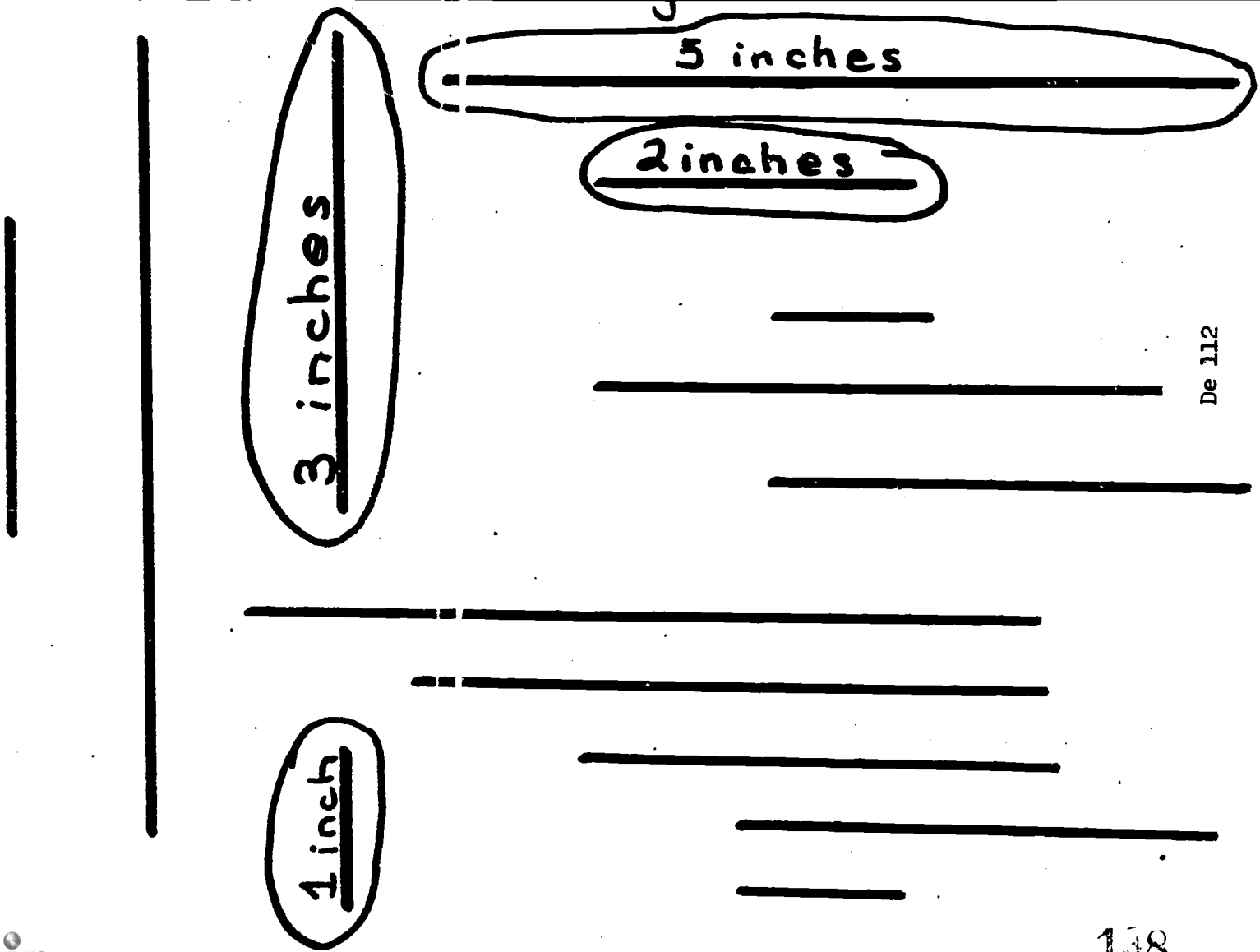
red and label any lines 5 inches long.



Circle in red and label any lines 1 inch, 2 inches, 3 inches, 4 inches, or 5 inches long.

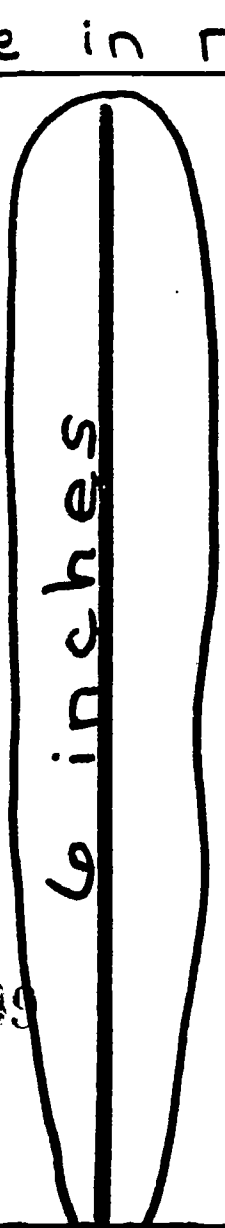


n red and label any lines 1 inch, 2 inches, 4 inches, or 5 inches long.

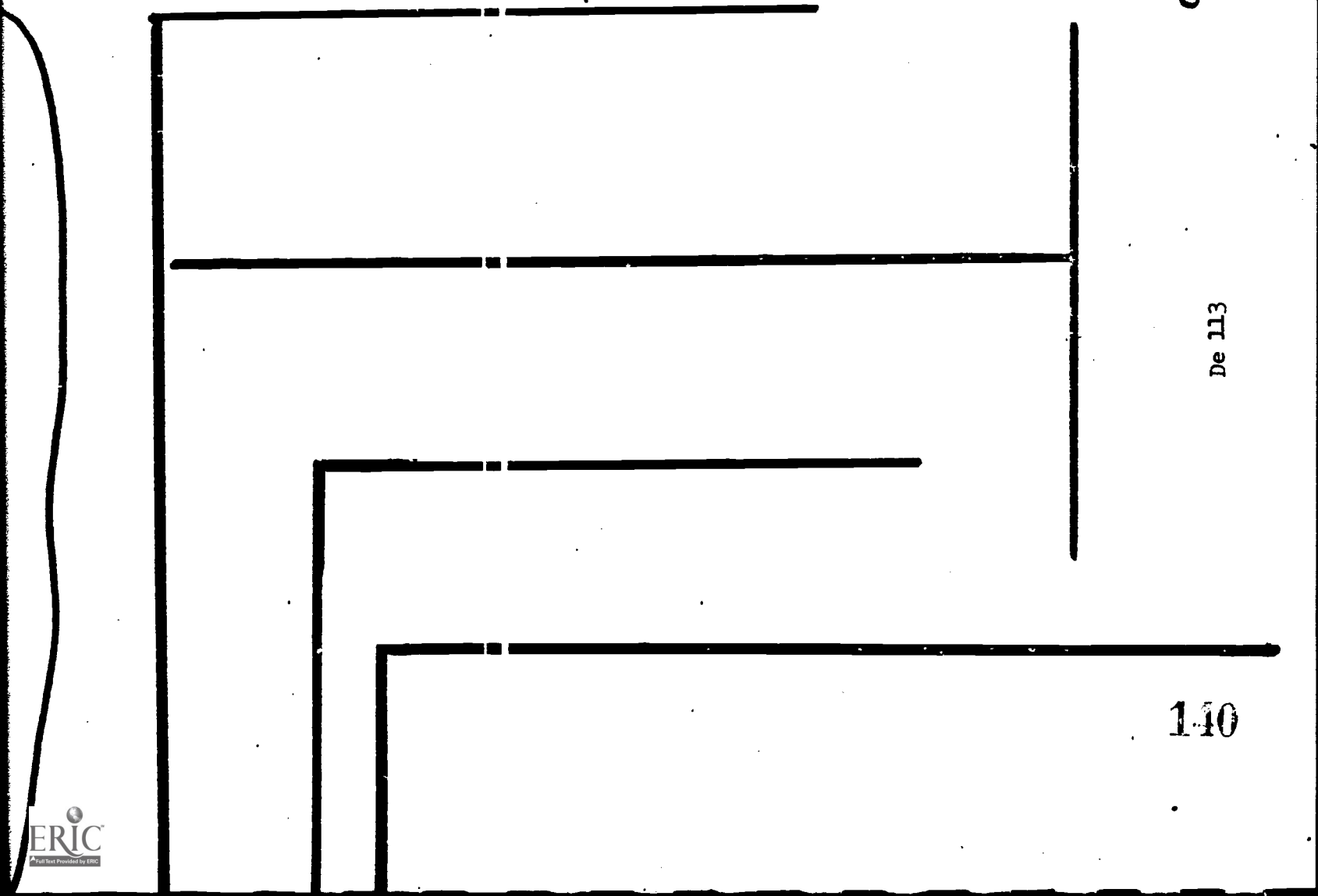


De 112

Circle in red and label any lines 6 inch



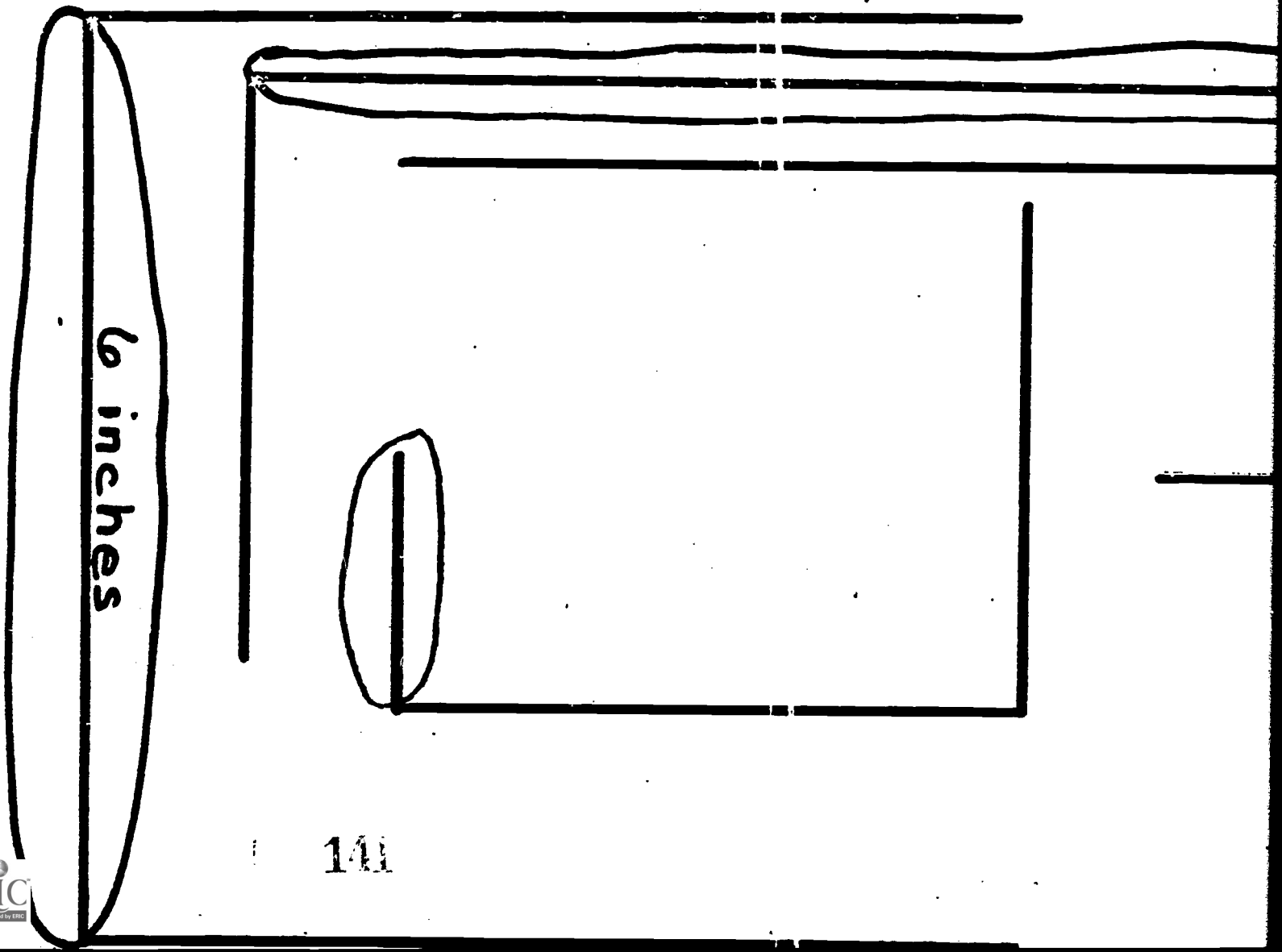
red and label any lines 6 inches long.



Circle in blue any lines longer than

Circle in green any lines shorter than

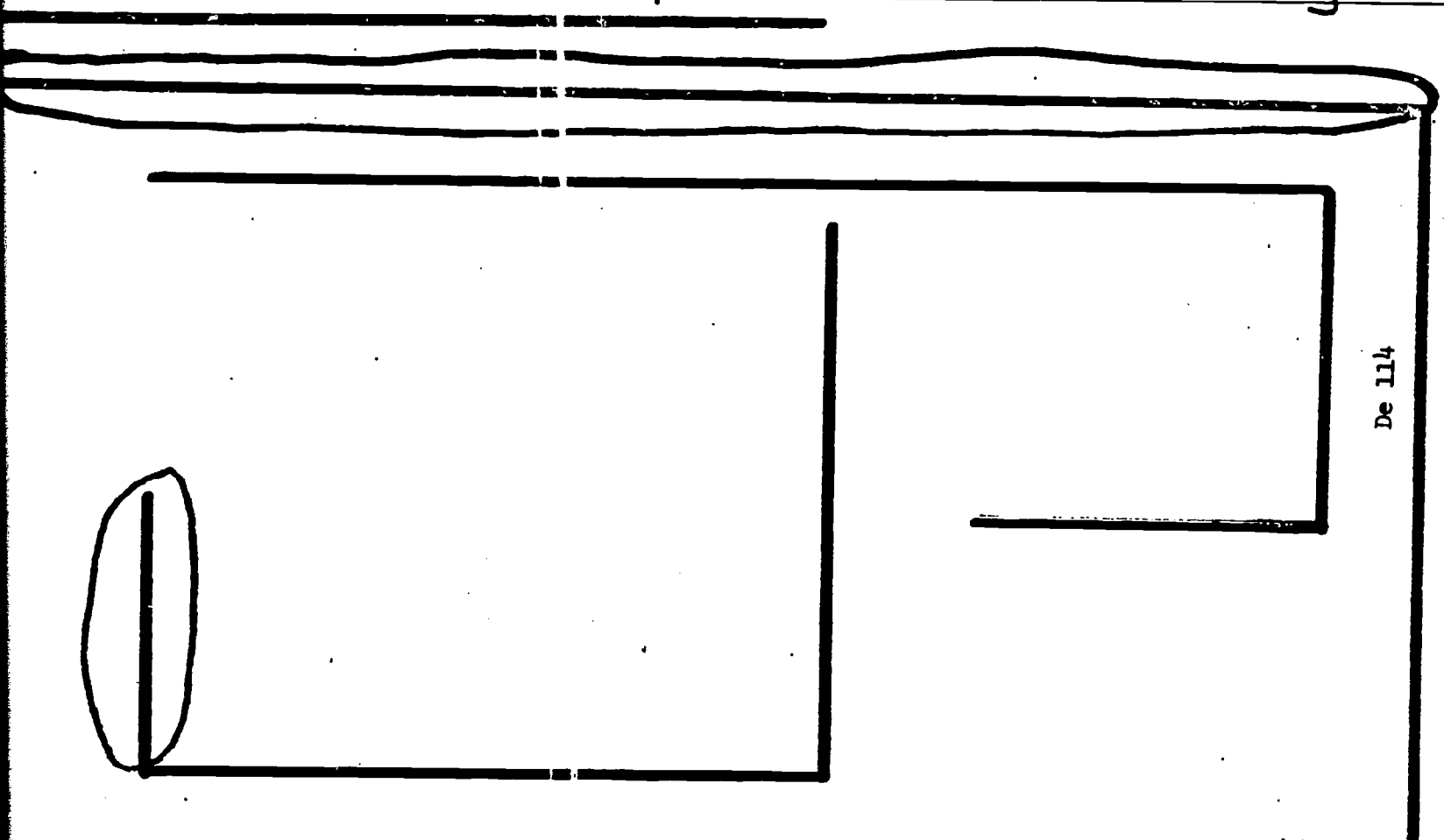
Circle in red and label any lines 6 inch



blue any lines longer than 6 inches.

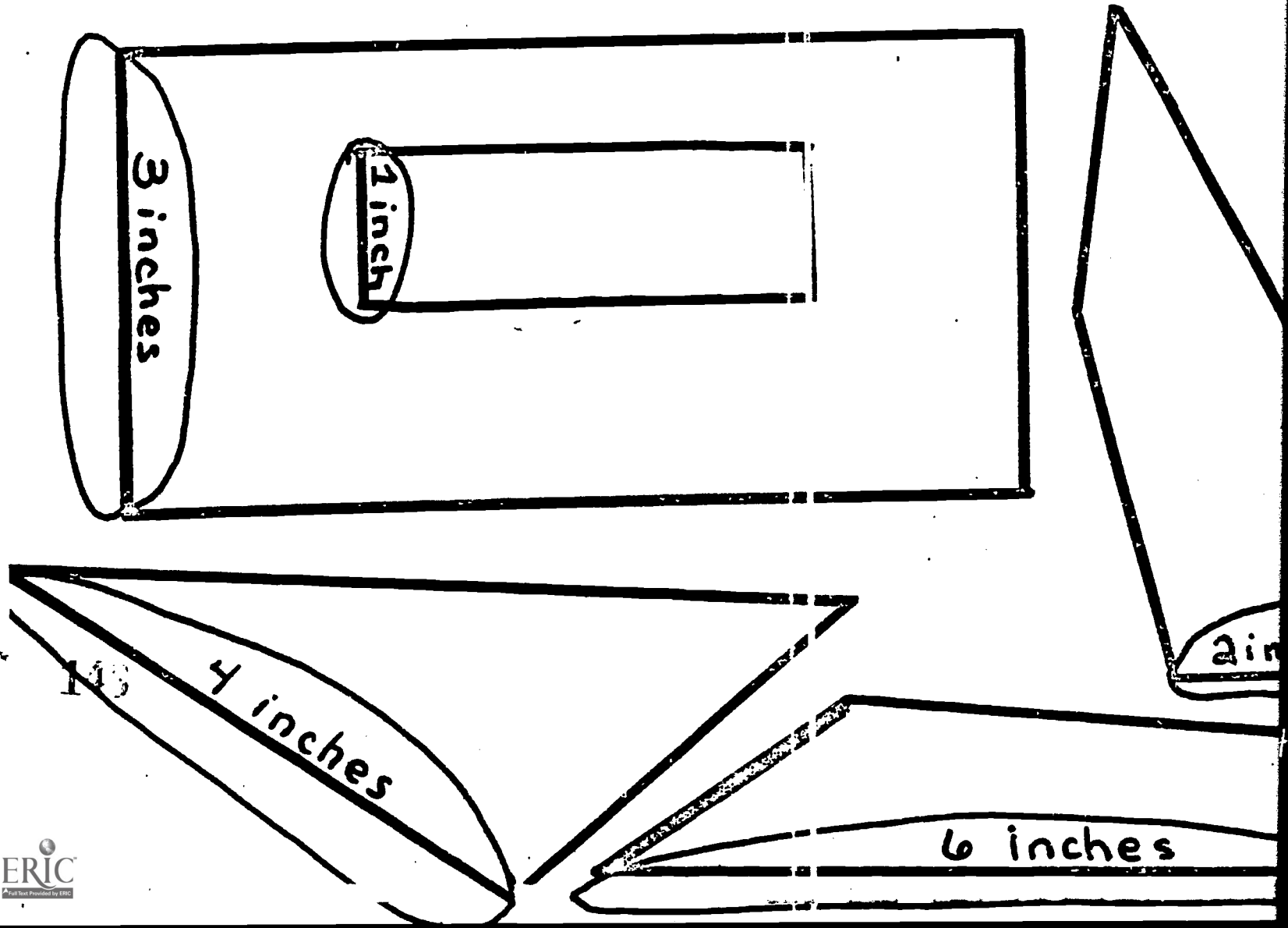
green any lines shorter than 6 inches

red and label any lines 6 inches long



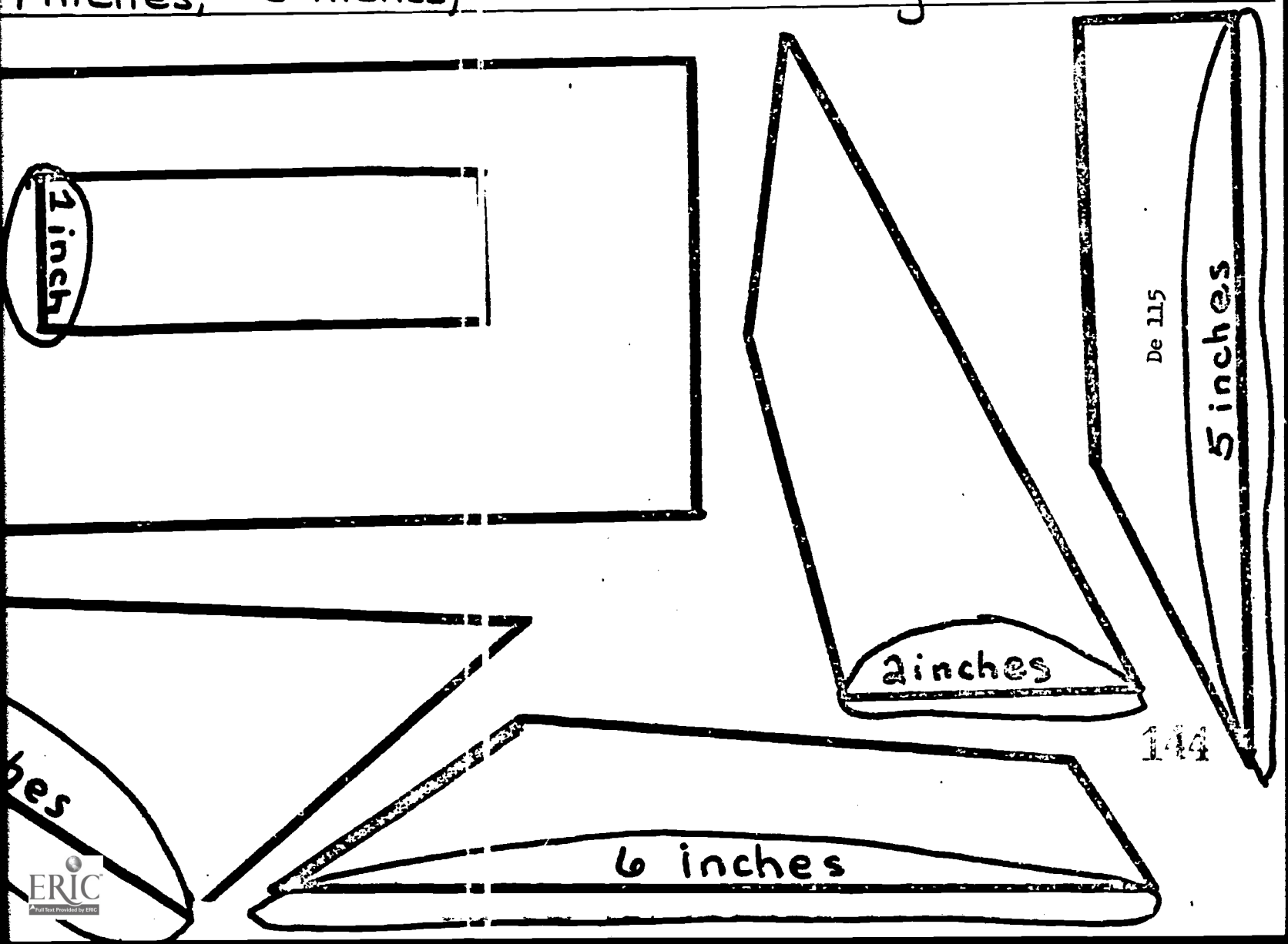
De 114

Circle in red and label any lines 1inch 3 inches, 4 inches, 5 inches, or 6 inches long.



red and label any lines 1inch, 2 inches,

4 inches, 5 inches, or 6 inches long.



De 115

IMMEDIATE REINFORCEMENT FOR NUMBER FACTS

The following pages illustrate one of the several ways in which this drill plan can be constructed. The teacher will probably want to make the charts larger, using felt pens for numerals. If the children are to use the chart on their desks, it should not be too large for convenience. 12 X 18 construction paper is usable.

In order to include all the possible numeral combinations, both addition and subtraction, it would be necessary to make about six of the charts.

Same size answer sheets are prepared. A sample answer page for "fives" combinations is included here. The boxes containing the fives are cut out of the answer sheet, so that if it is laid over the chart all of the fives combinations would be exposed.

The teacher will prepare separate answer sheets for 1's, 2's, 3's, 4's, 6's, 7's, 8's, and 9's. By being sure to place all of the 4's combinations, or 7's combinations, etc. in the same spots on all of the charts, one answer sheet for each of the 9 numerals will serve all of the charts instead of only one chart.

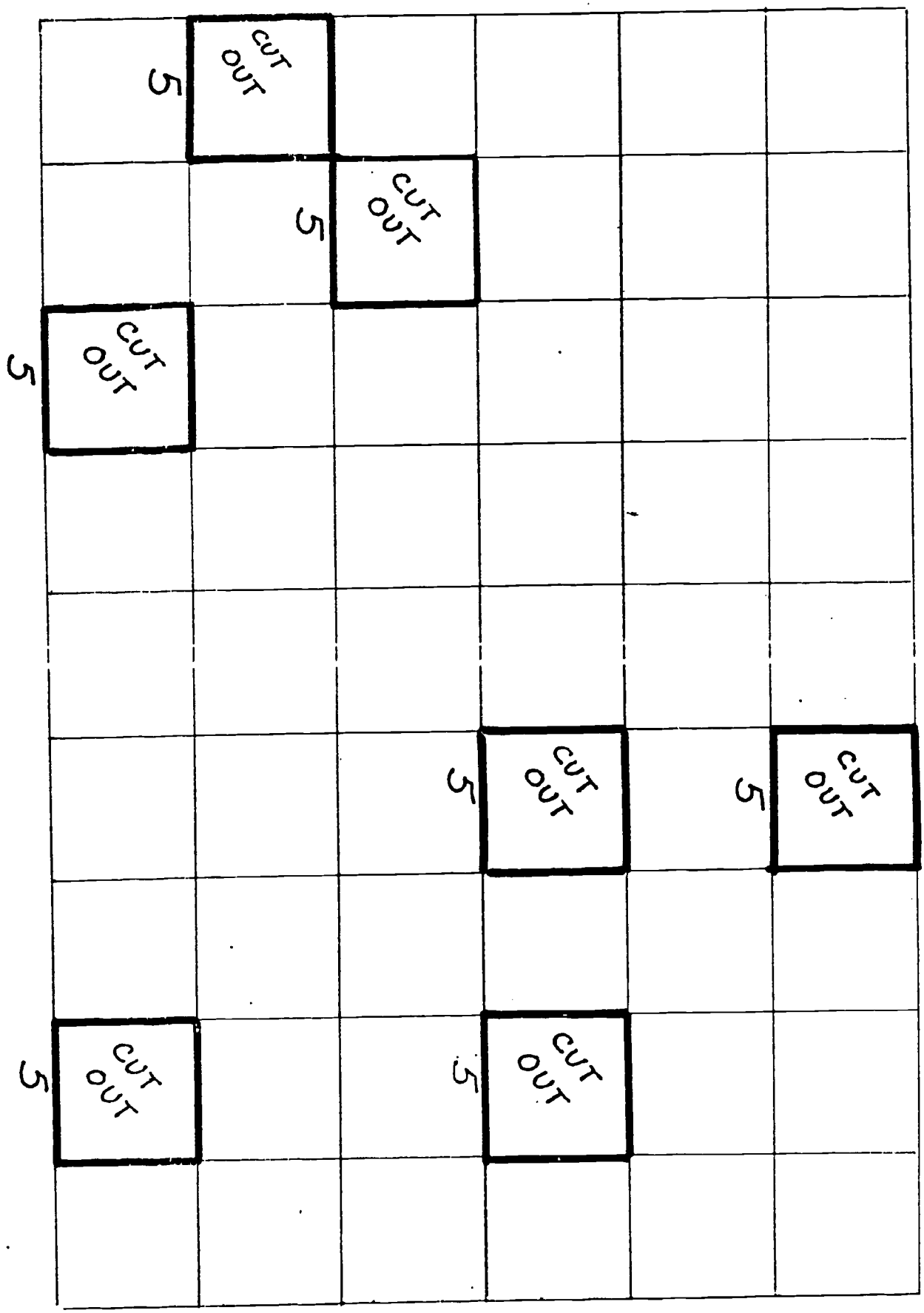
The teacher also prepares a number of colored squares the same size as the squares contain the numerals. The child is given several of the colored squares. The child is then asked to cover each of the "fives" (or any other number) combinations on his chart with the colored squares. When he has all he thinks would make five, the "fives" answer sheet is laid over his chart. The correct combinations, covered by the colored squares, would be immediately exposed. If he has missed any, the combination will show instead of the colored cover. If any answers are incorrect, the colored square shows faintly through the answer sheet.

Teachers are cautioned not to use the device competitively because many children with learning problems readily become excitable and/or contentious with competitive pressure.

As the child gains confidence, it may be an added incentive to let him time himself on a timer and set out to beat his previous records. Sometimes children can help each other, and thus both help themselves and save the teacher's time.

by

Inez Griffith

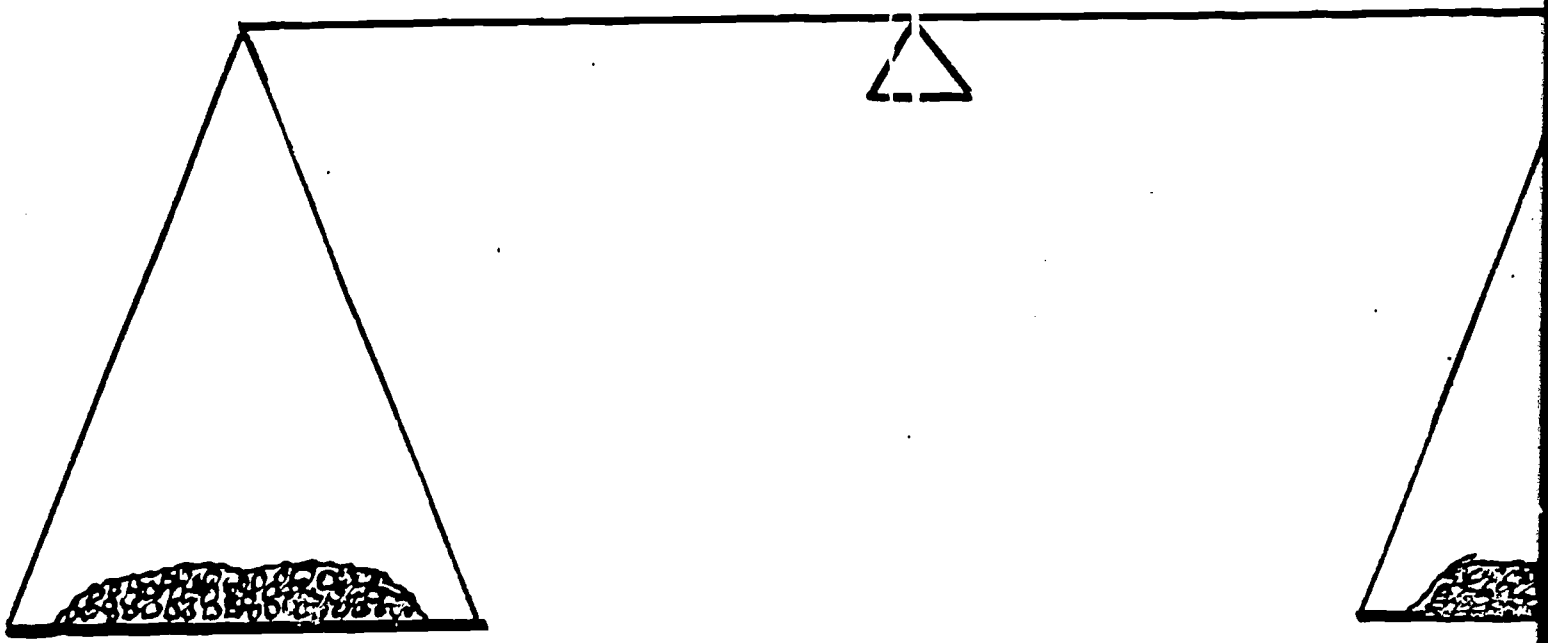

5
CUT OUT
5
CUT OUT
5
CUT OUT
5
CUT OUT
5
CUT OUT
5
CUT OUT
5
CUT OUT

1 +6	5 +1	3 +5	2 +1	4 +2	2 +3	5 +2	1 +2
0 +8	1 +1	3 +0	2 +2	6 +1	1 +3	2 +1	3 +3
4 +0	3 +3	2 +2	7 +0	1 +1	3 +2	5 +2	0 +5
2 +4	5 +0	1 +5	0 +3	4 +2	2 +0	5 +1	7 +1
2 +3	0 +2	3 +4	4 +2	0 +4	2 +5	3 +1	2 +2
6 +0	4 +3	4 +1	1 +7	2 +1	3 +3	8 +0	1 +4

5 + 1	3 + 5	2 + 1	4 + 2	2 + 3	5 + 2	1 + 2	4 + 4
1 + 1	3 + 0	2 + 2	6 + 1	1 + 3	2 + 1	3 + 3	3 + 1
3 + 3	2 + 2	7 + 0	1 + 1	3 + 2	5 + 2	0 + 5	5 + 3
5 + 0	1 + 5	0 + 3	4 + 2	2 + 0	5 + 1	7 + 1	2 + 0
0 + 2	3 + 4	4 + 2	0 + 4	2 + 5	3 + 1	2 + 2	5 + 2
4 + 3	4 + 1	1 + 7	2 + 1	3 + 3	8 + 0	1 + 4	2 + 6

Dr 118

EQUAL?

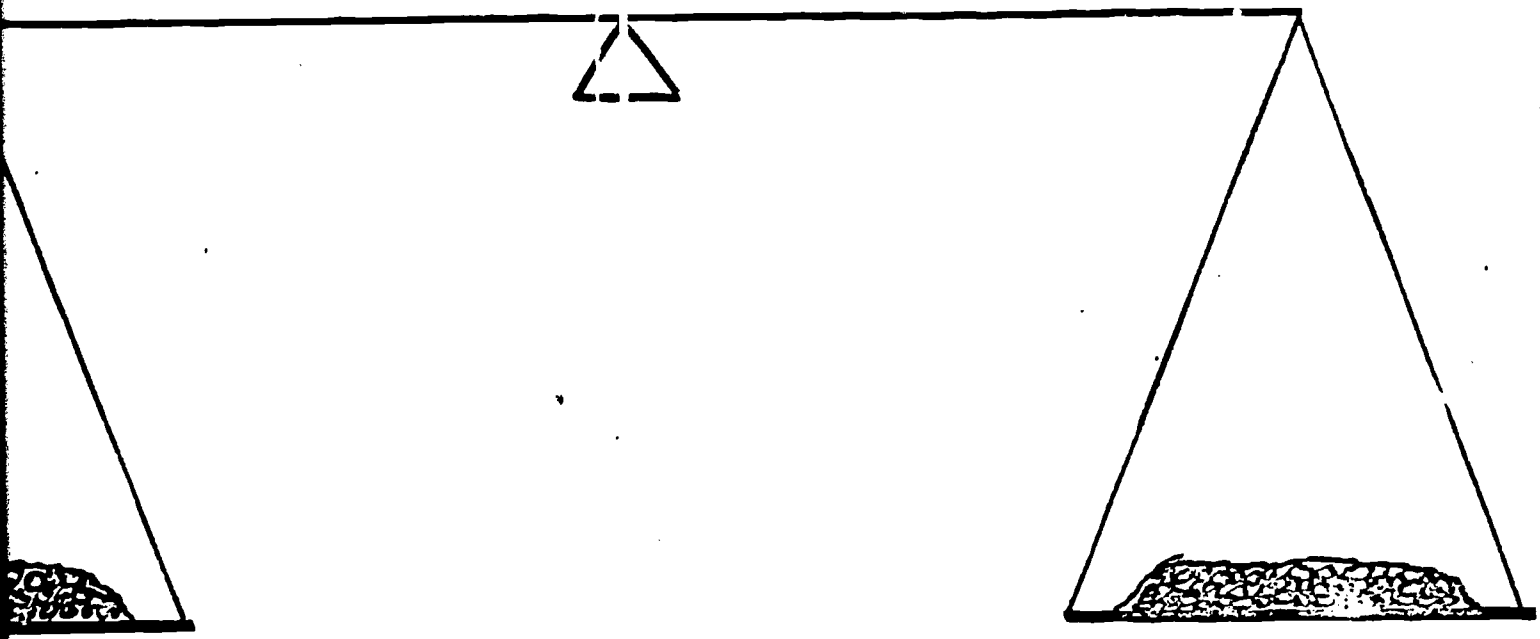


REASONING - QUANTITY - SIZE

by

James Tana

EQUAL?



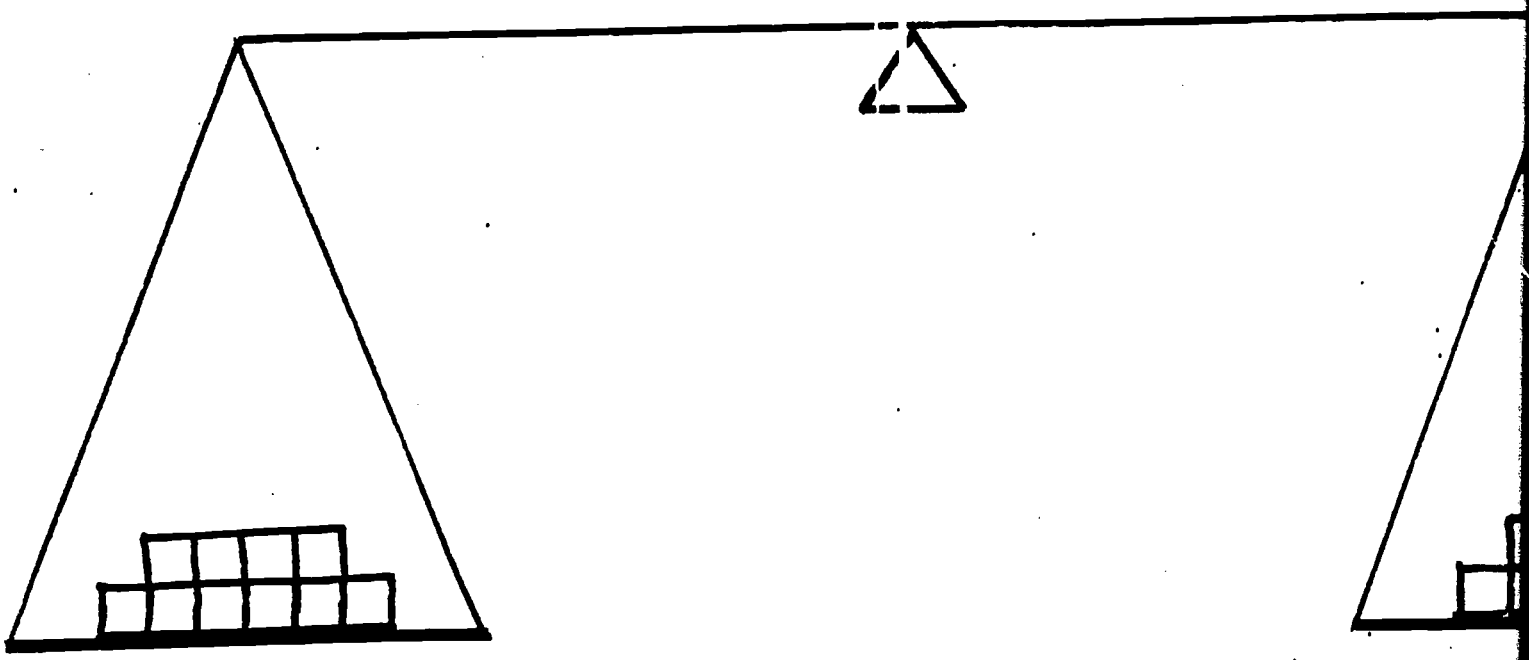
Dg 119

REASONING - QUANTITY - SIZE

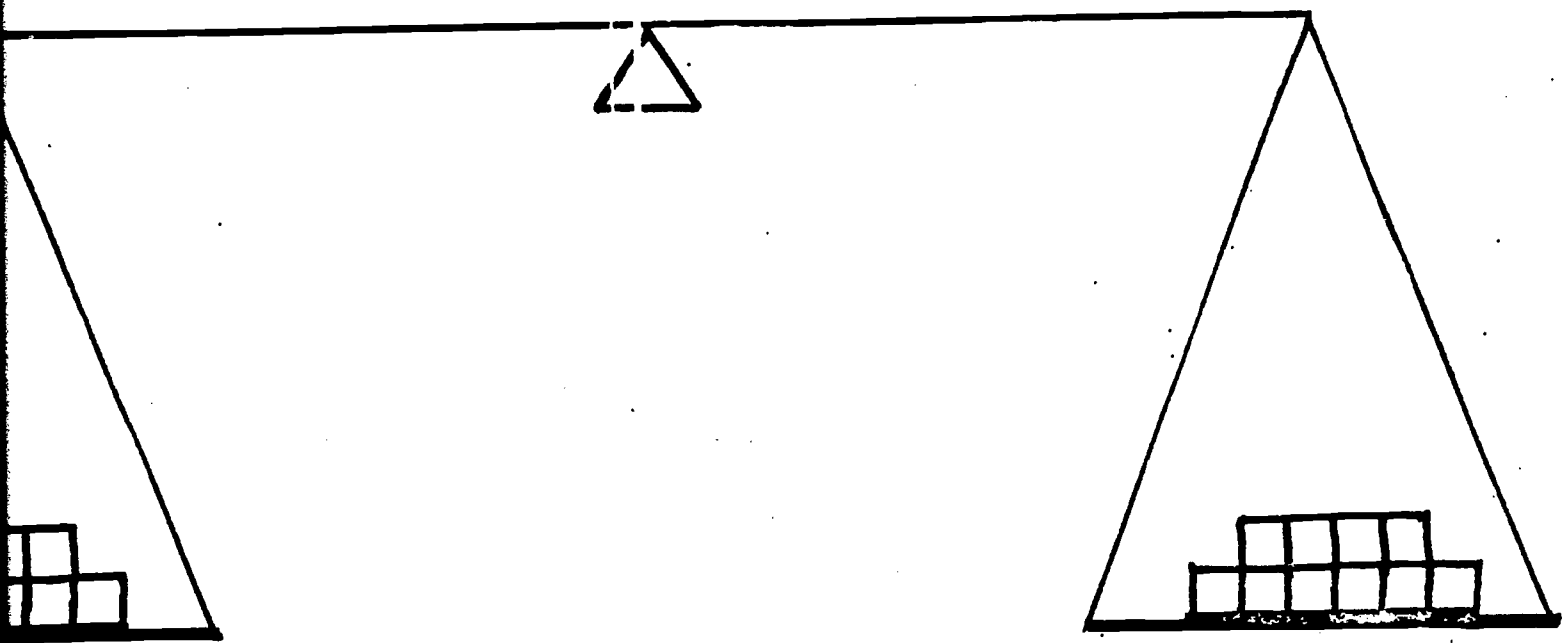
by

James Tanaka

EQUAL?

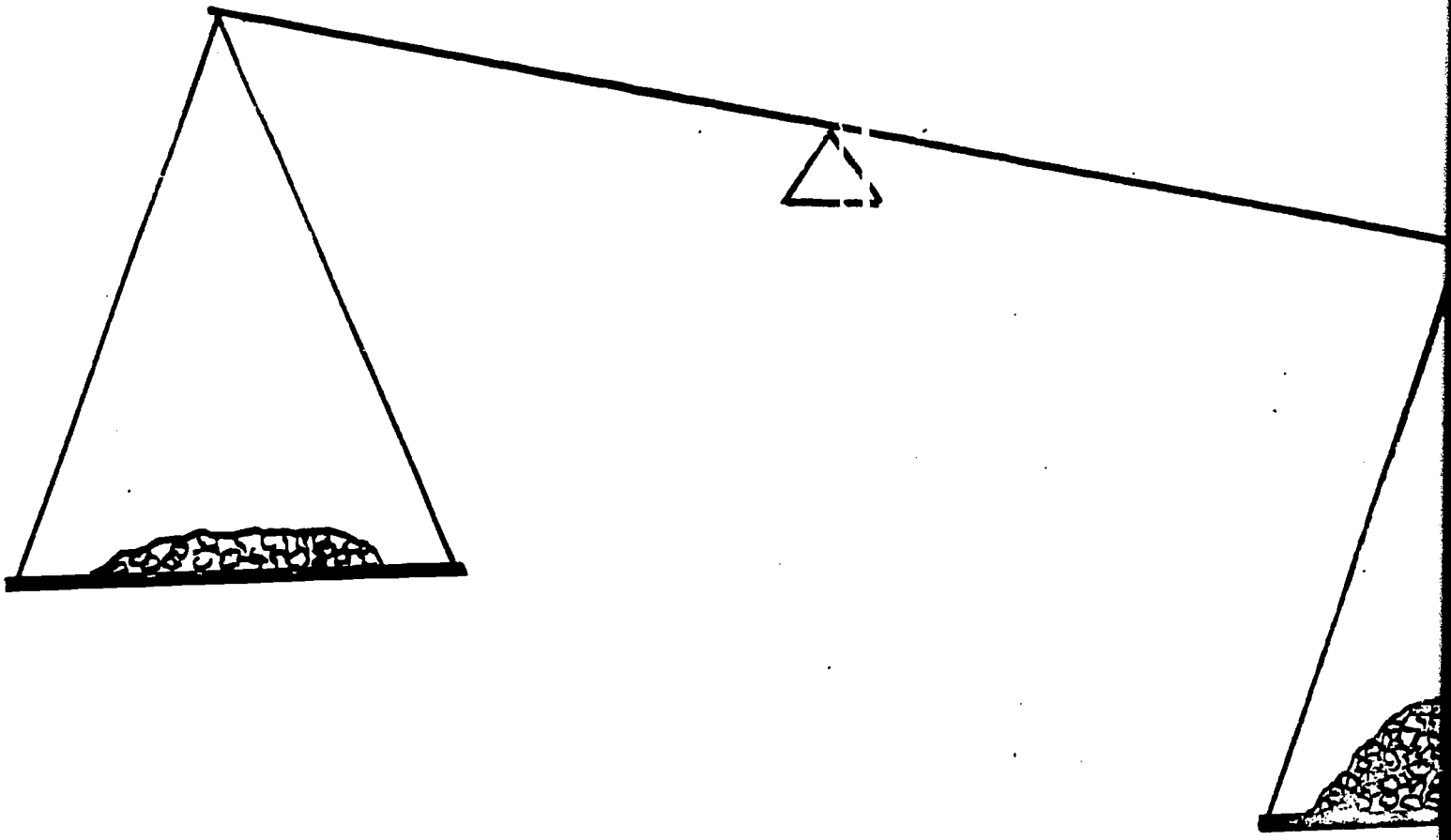


EQUAL?

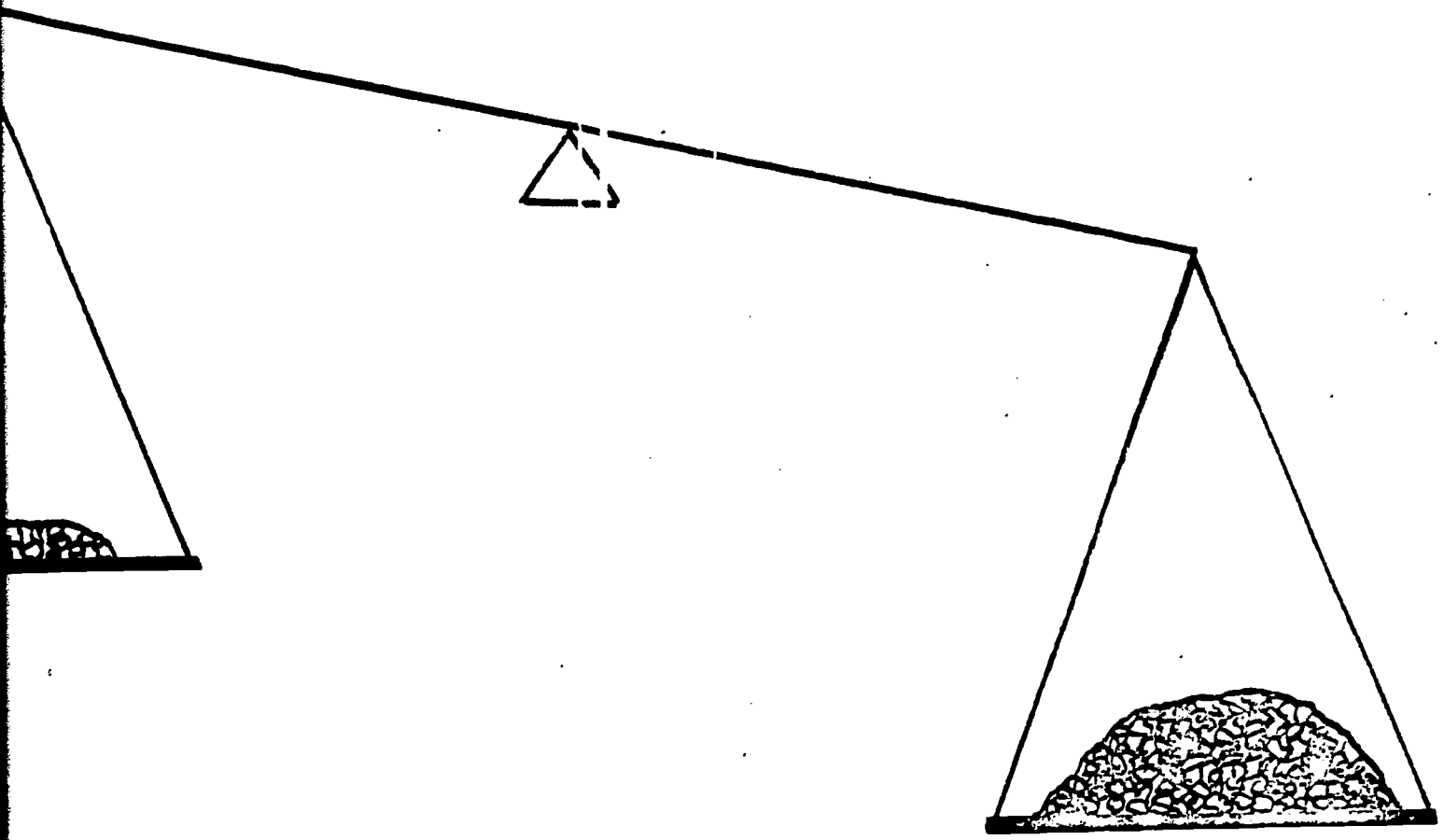


Dg 120

WHICH IS HEAVIER?

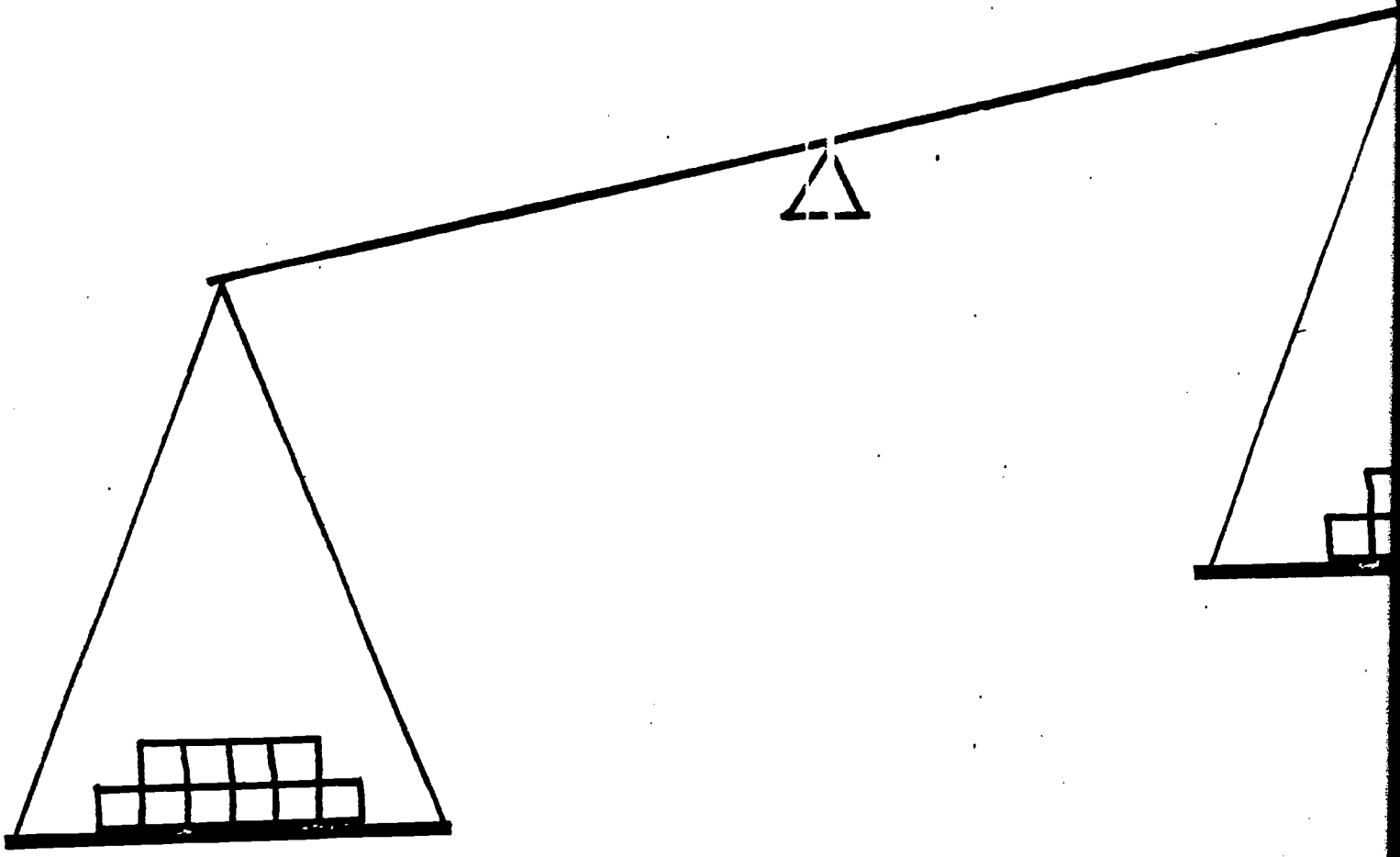


HICH IS HEAVIER?

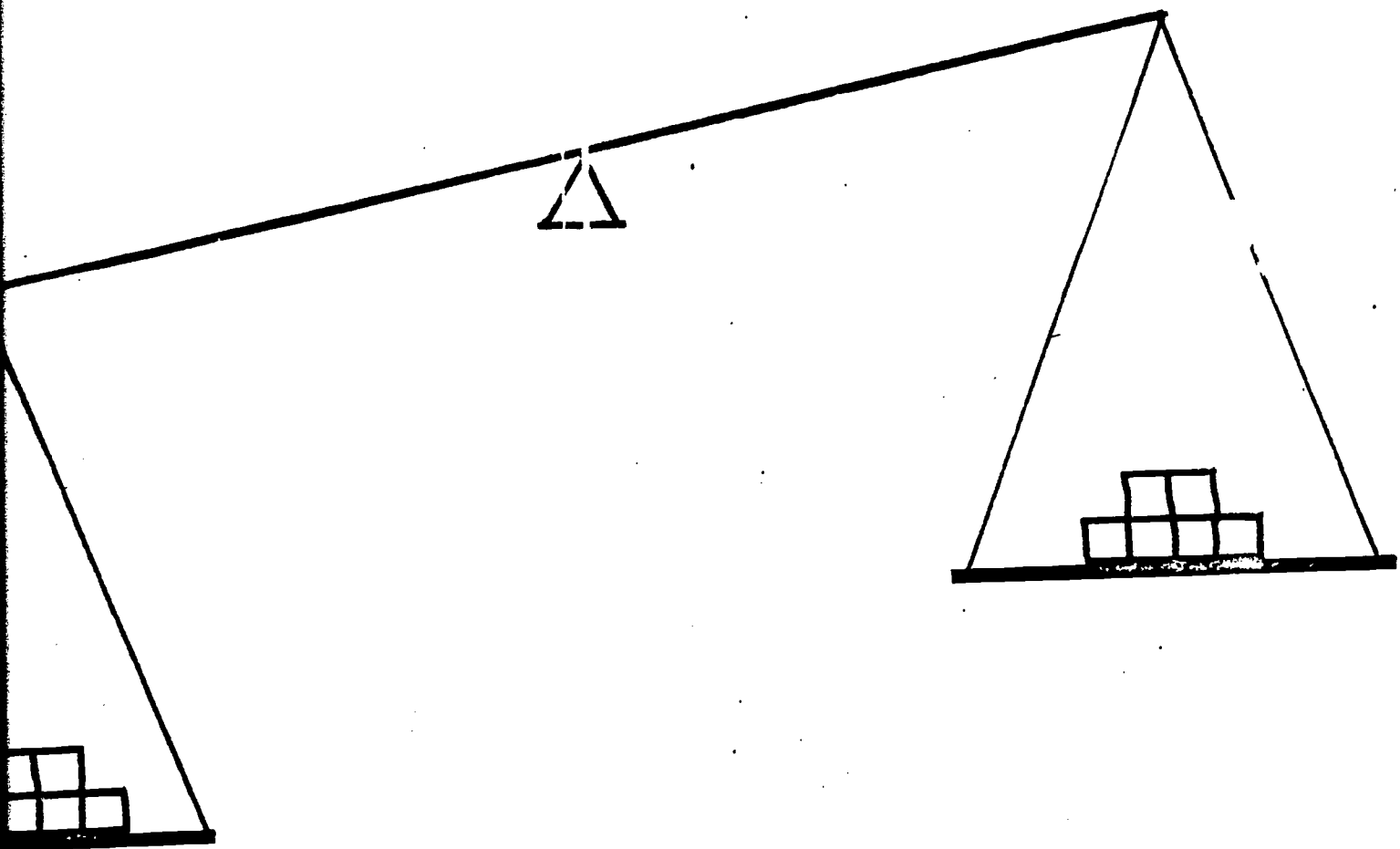


Dg 121

WHICH IS HEAVIER?



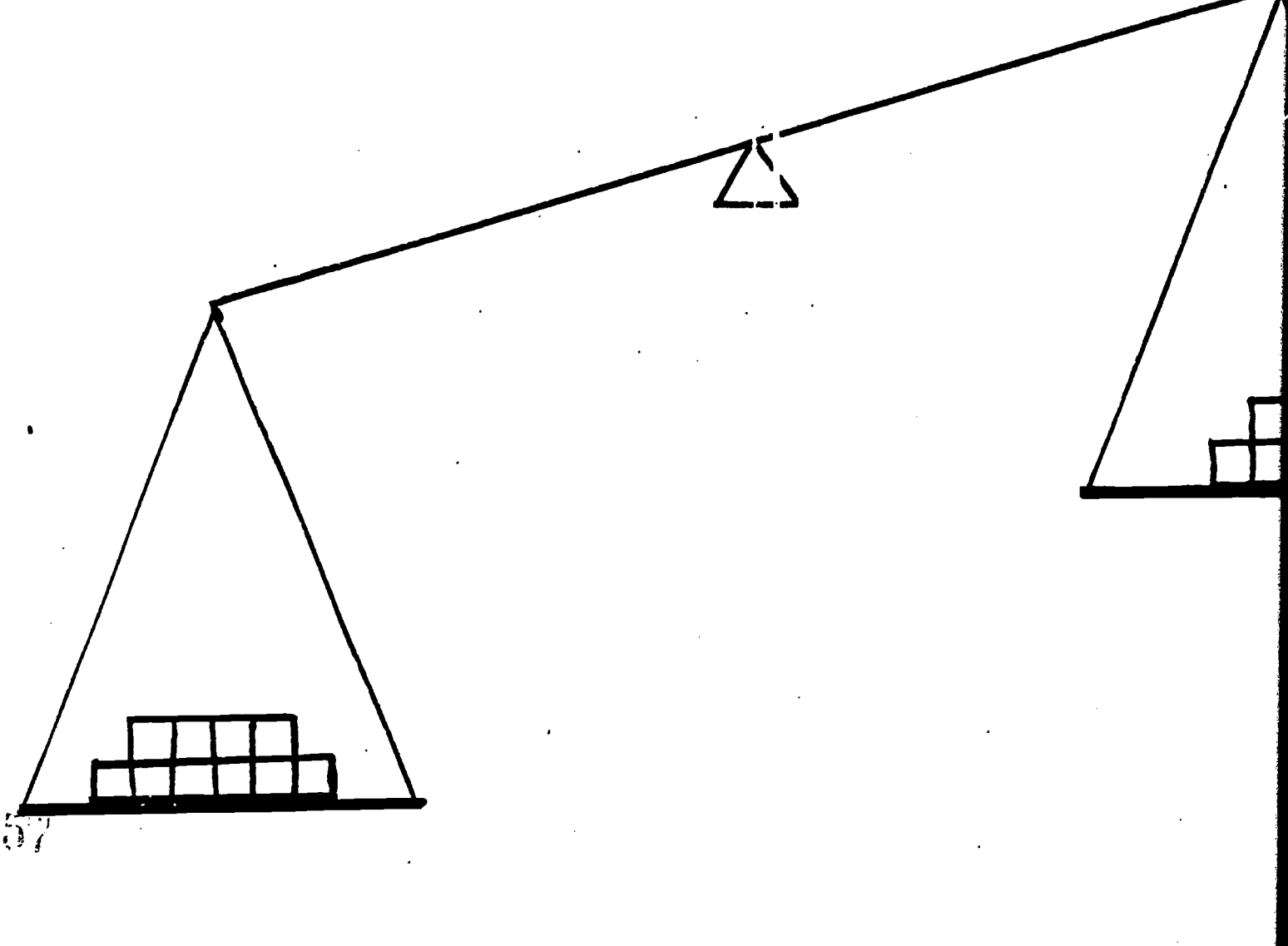
WHICH IS HEAVIER?



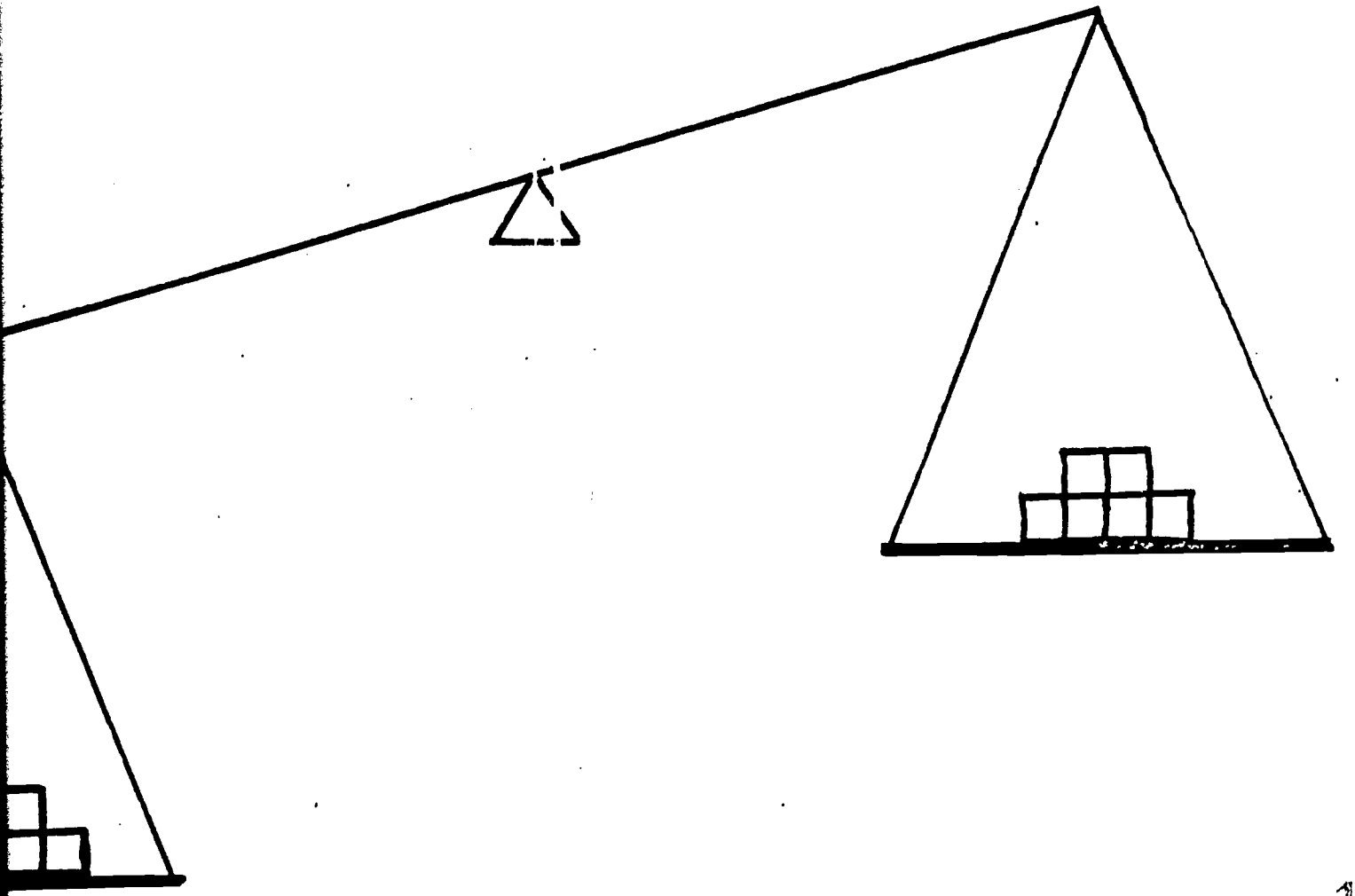
Dg 122

ERIC

WHICH HAS MORE?

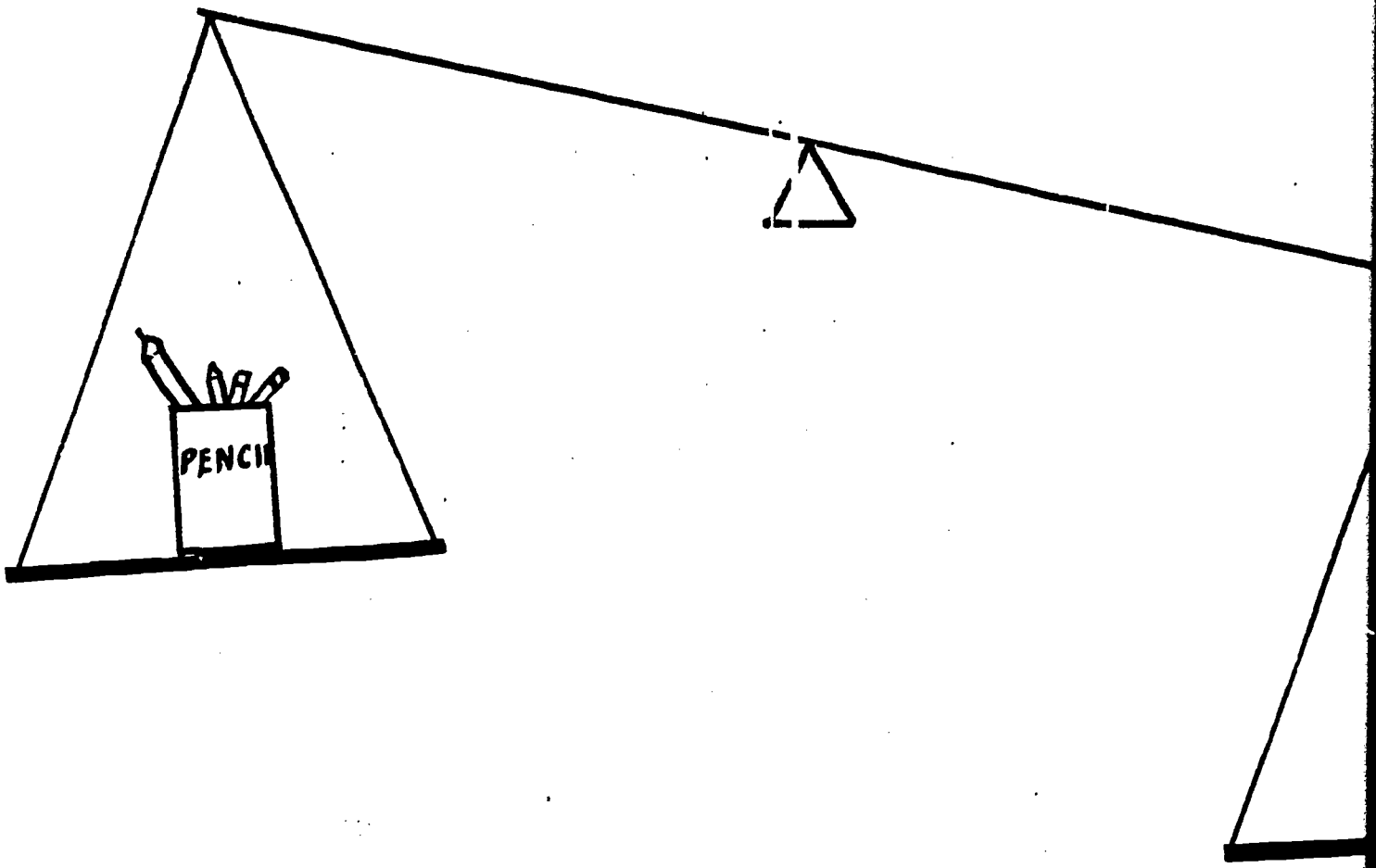


WHICH HAS MORE?

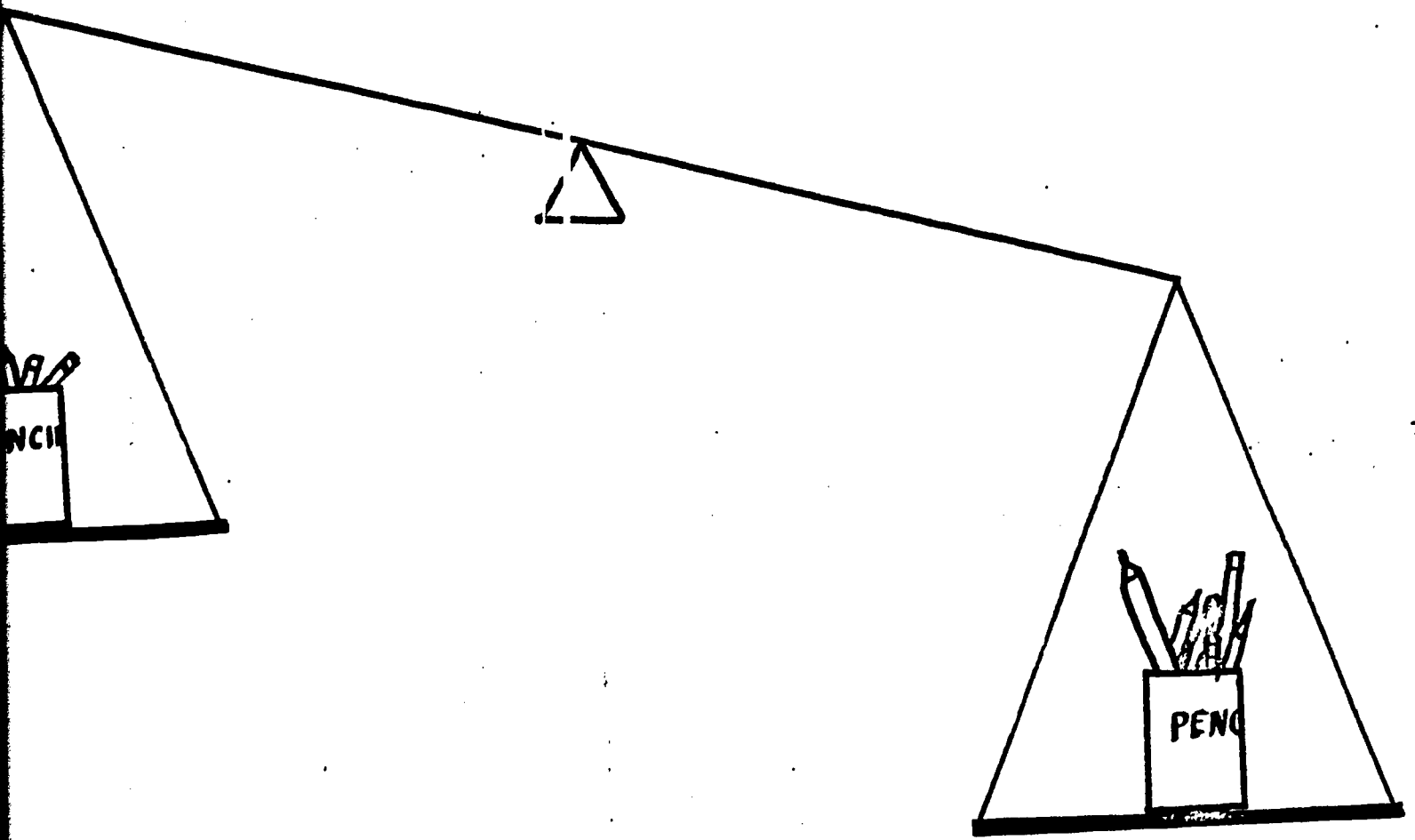


Dg 123

WHICH HAS MORE?

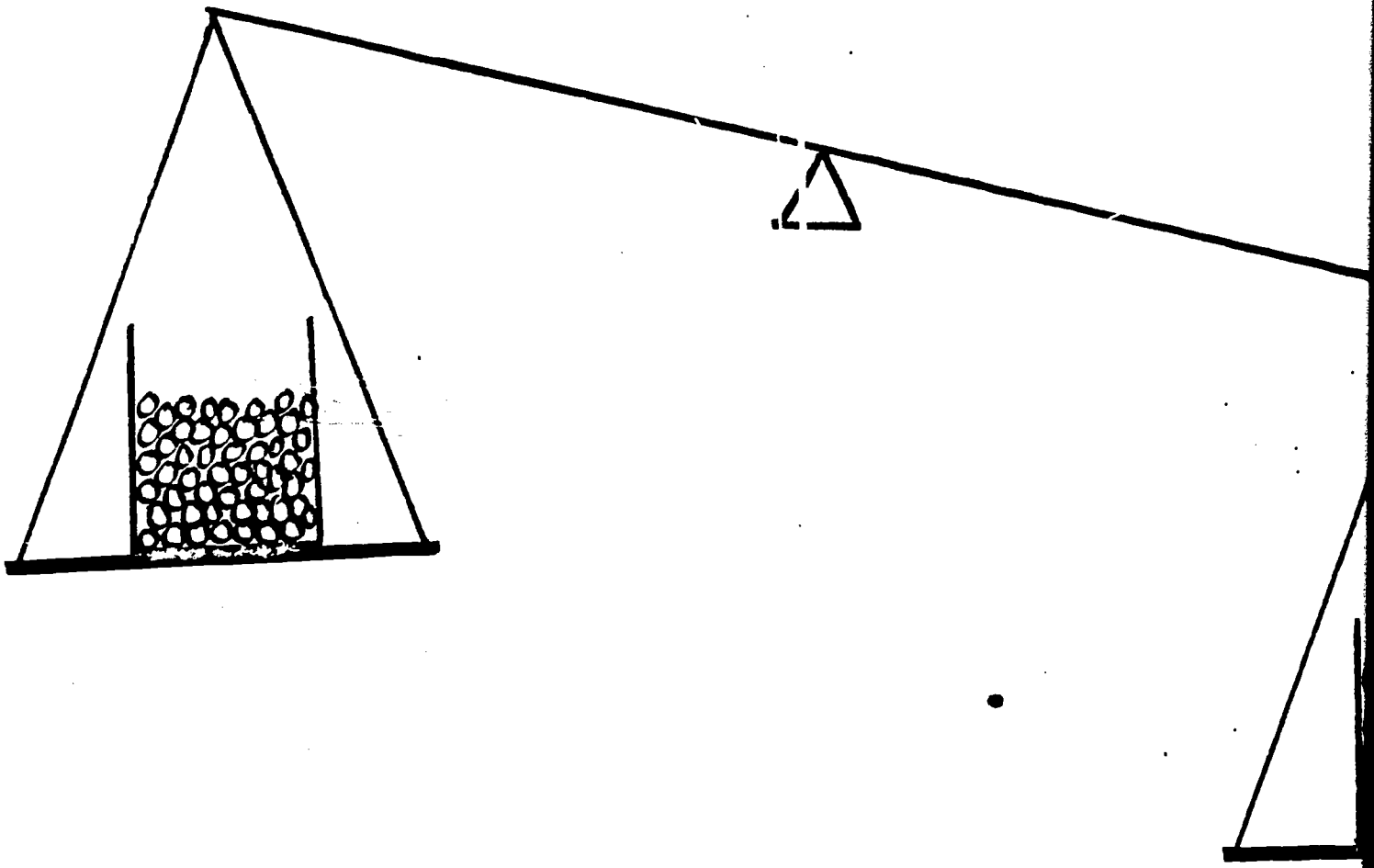


WHICH HAS MORE?

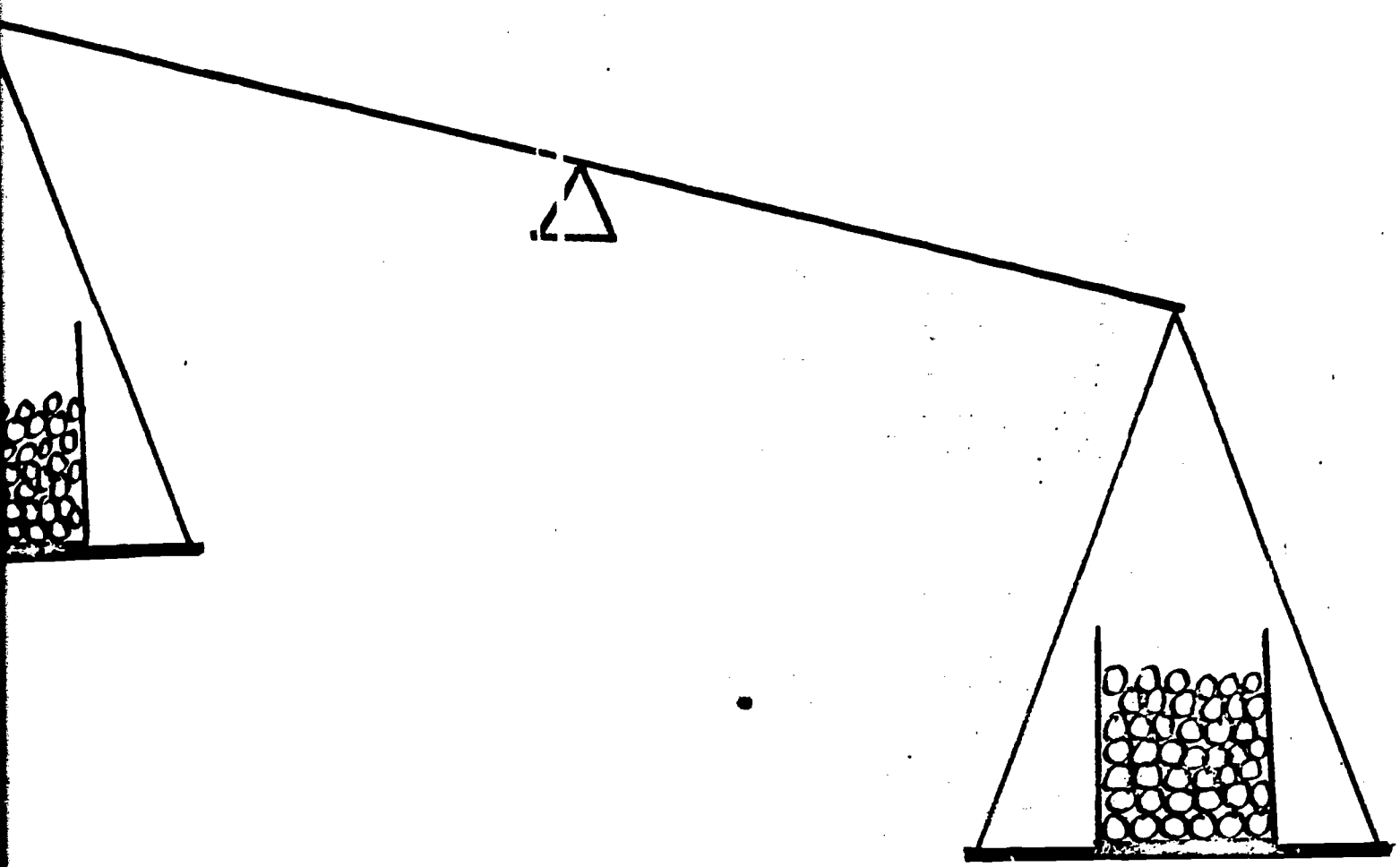


Dg 124

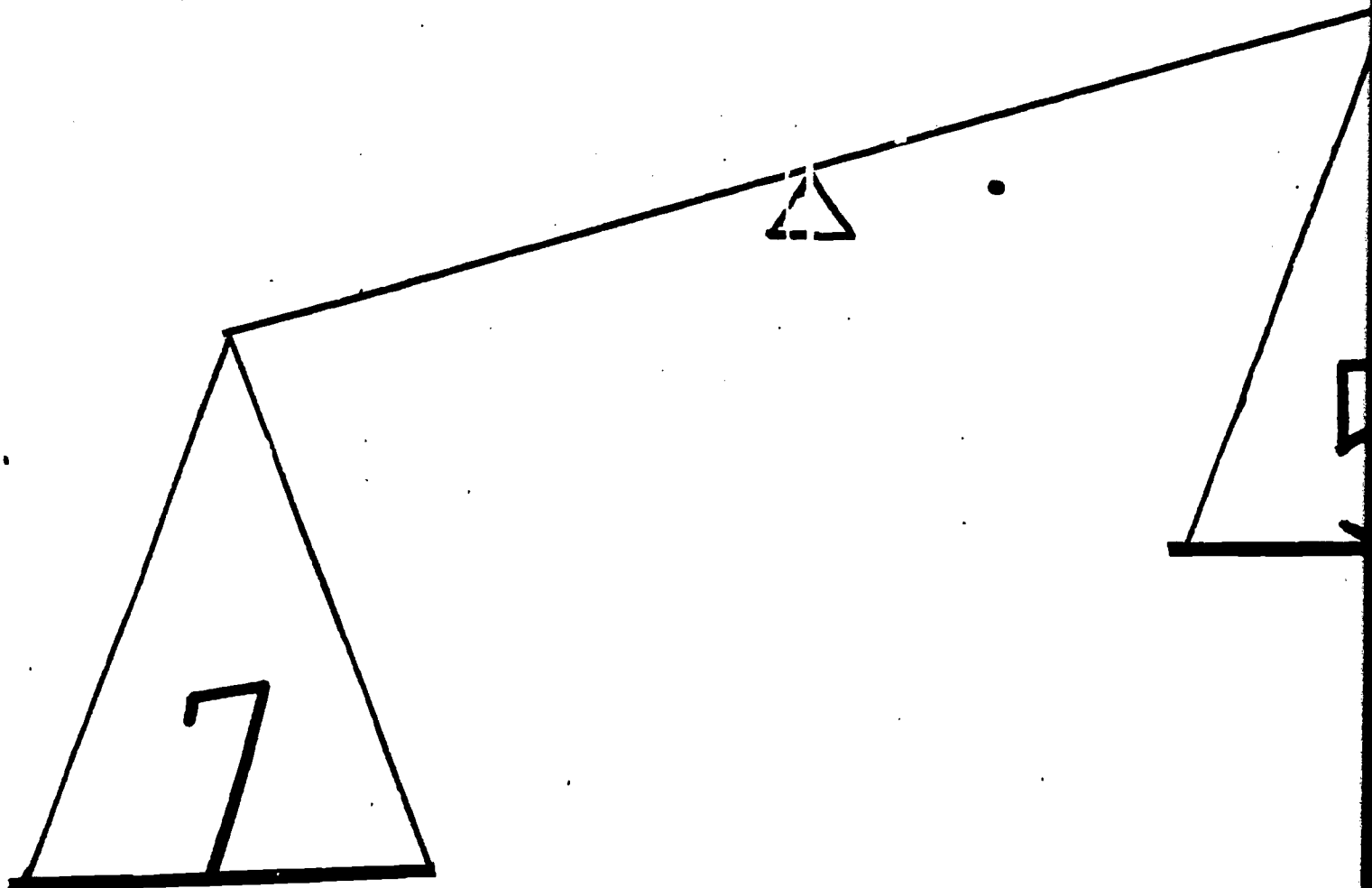
WHICH HAS LESS?



WHICH HAS LESS?

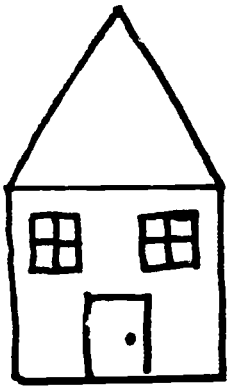


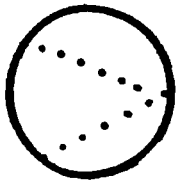
Dg 125

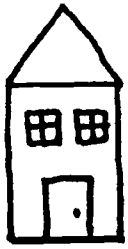

7

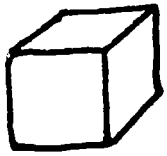
Dg 126

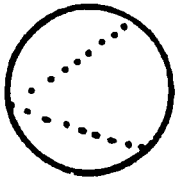
NUMERICAL REASONING by G. Eninger

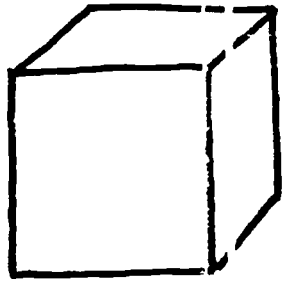






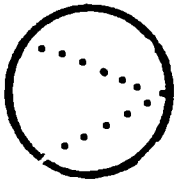


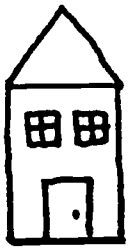


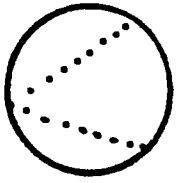


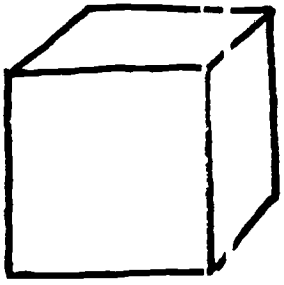
Place correct sign in the circles to indicate which one is larger. Fold back and cut right margin for self-correction.

ING by G. Eninger









rect sign in the circles to indicate
ger. Fold back and cut right
correction.

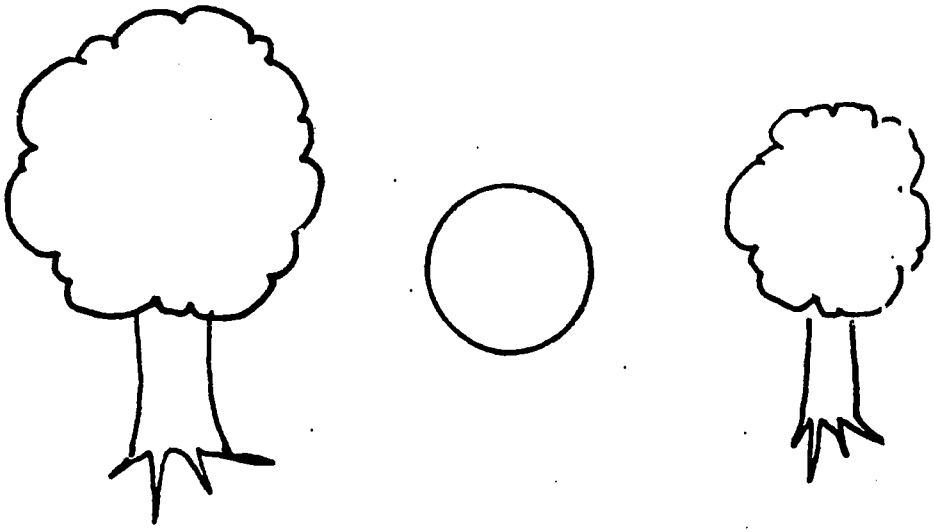
Key

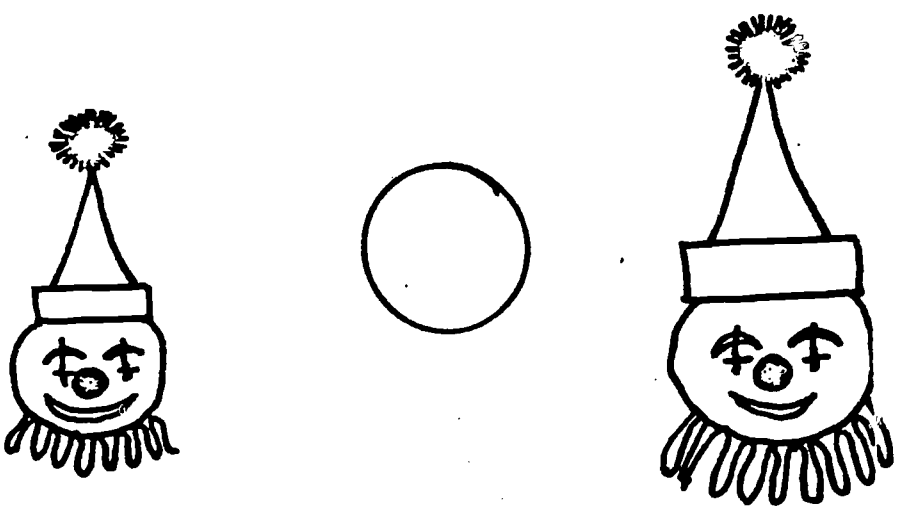
Fold

Clip

Dh 127

Fold



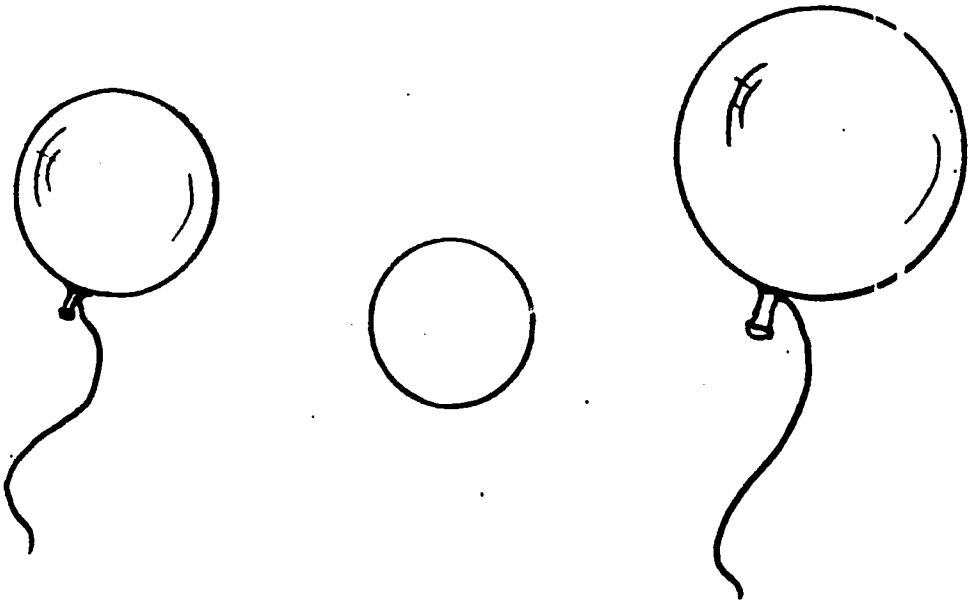


Fold

Clip

Dh 128

Fold

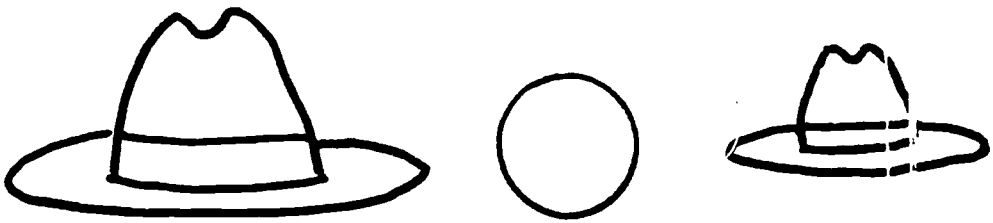


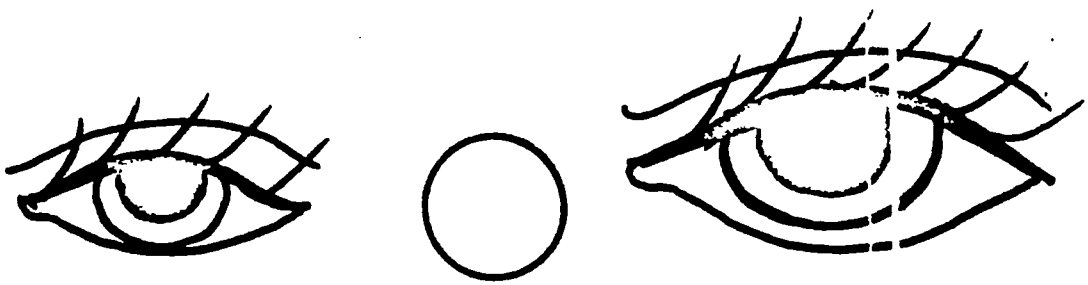
Fold

Clip

Dh 129

Fold





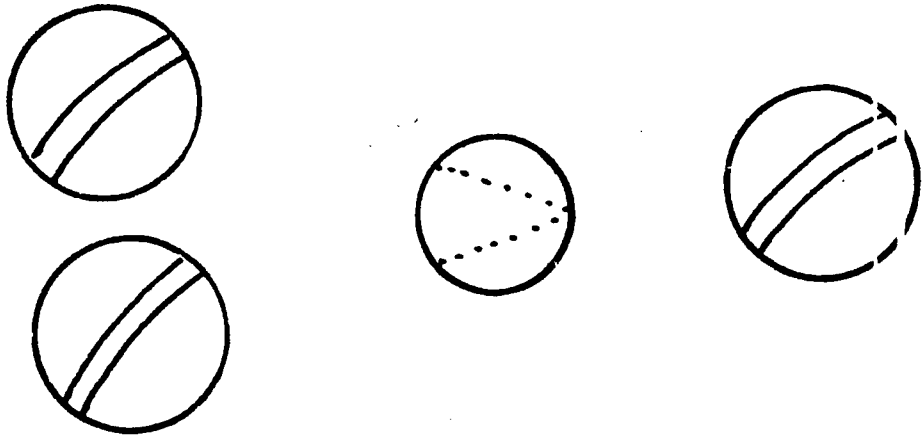
Fold

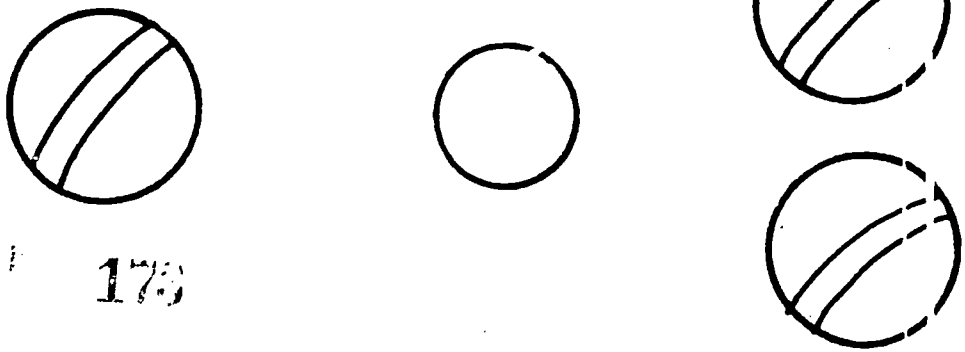
Clip

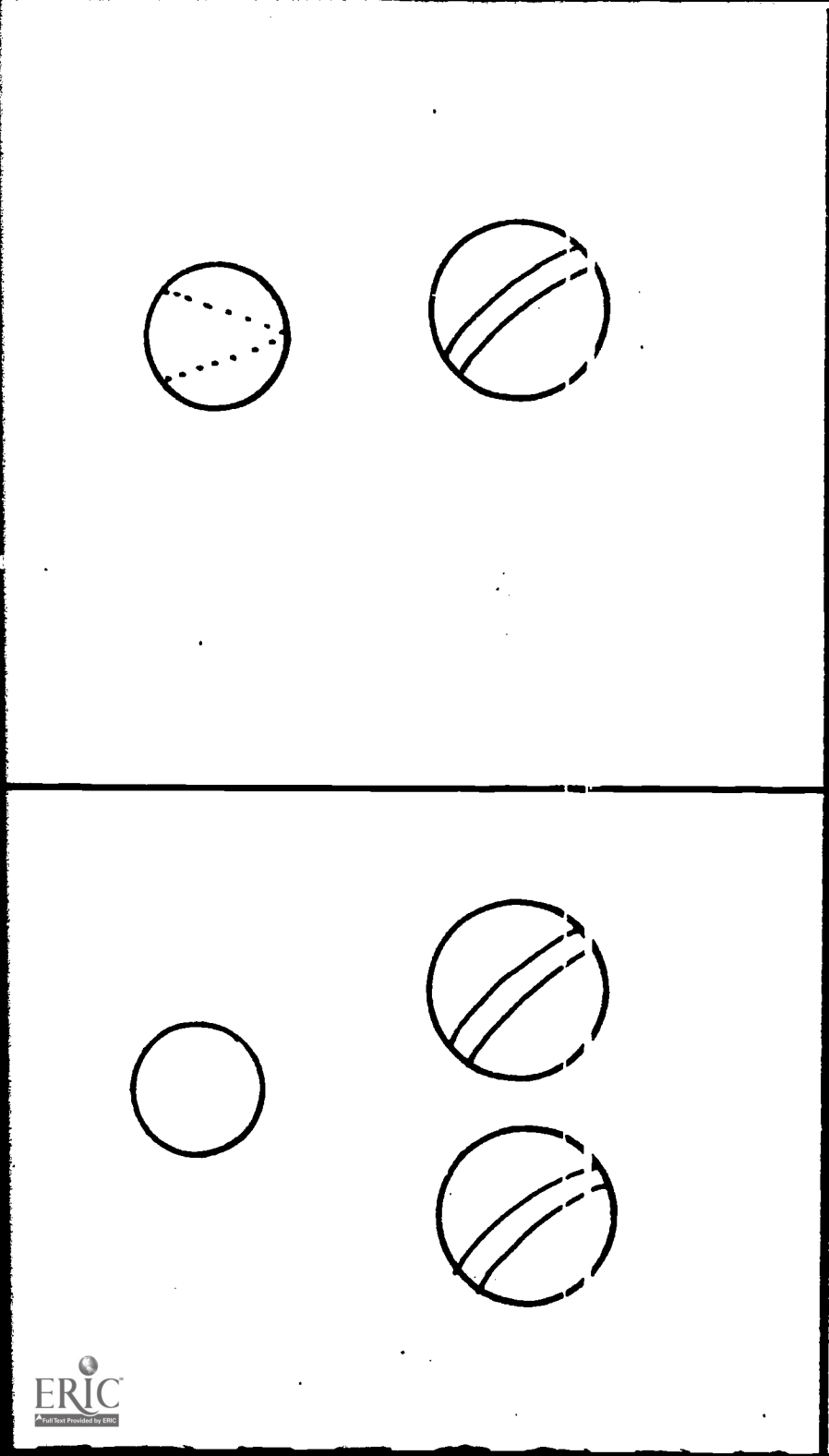
Dh 130

Fold

17





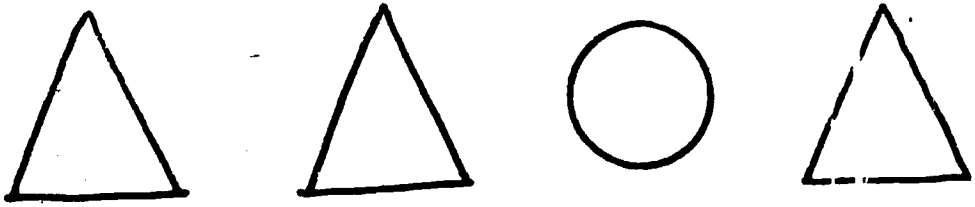


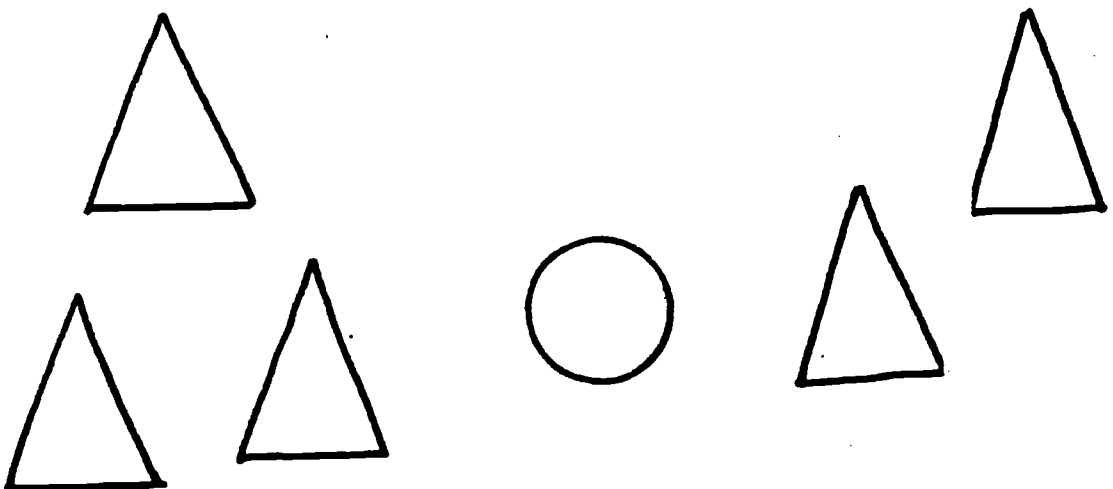
Fold

Clip

Dh 131

Fold



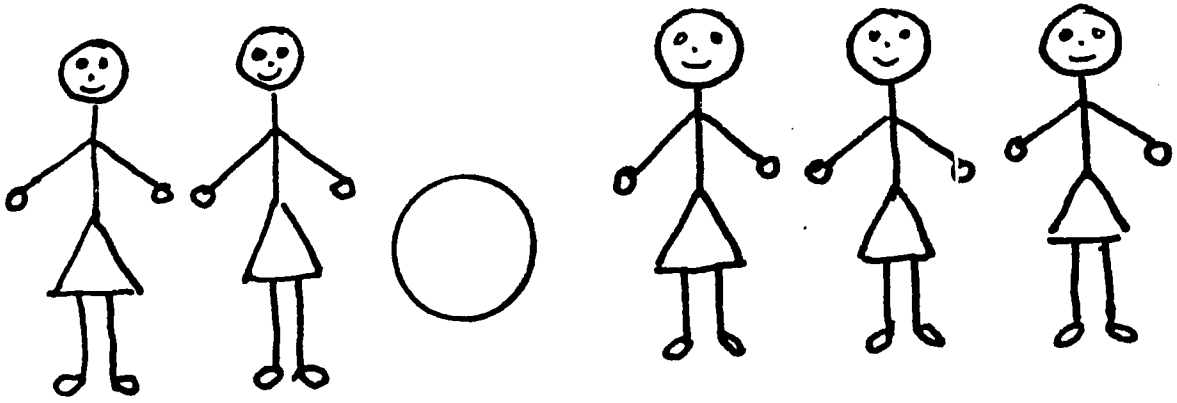


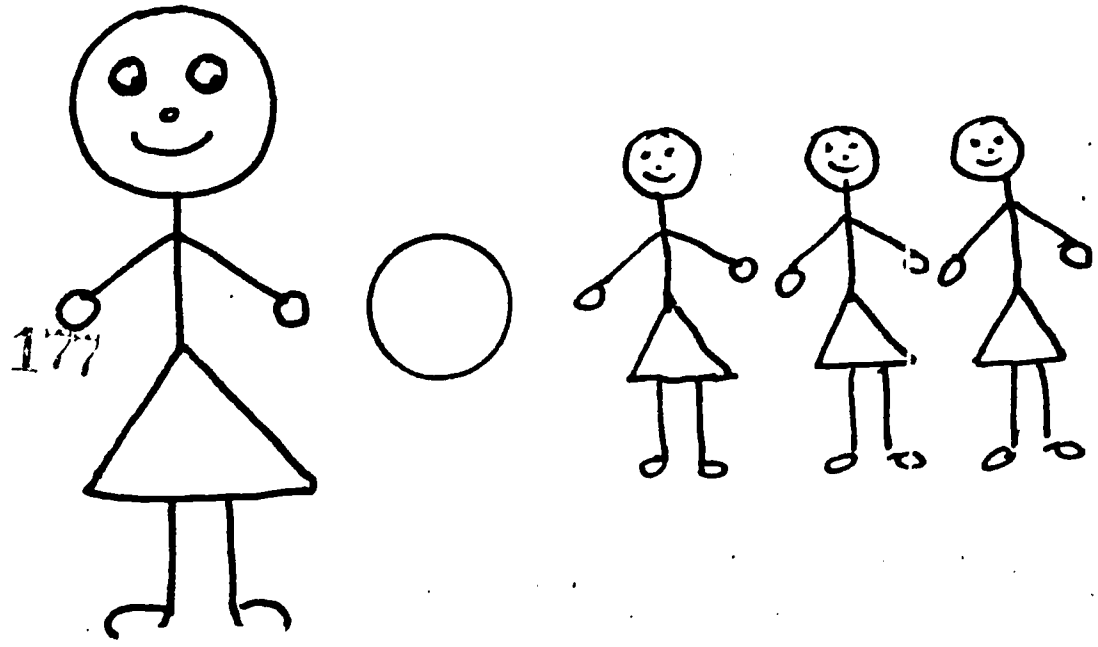
Fold

Clip

Dh 132

Fold





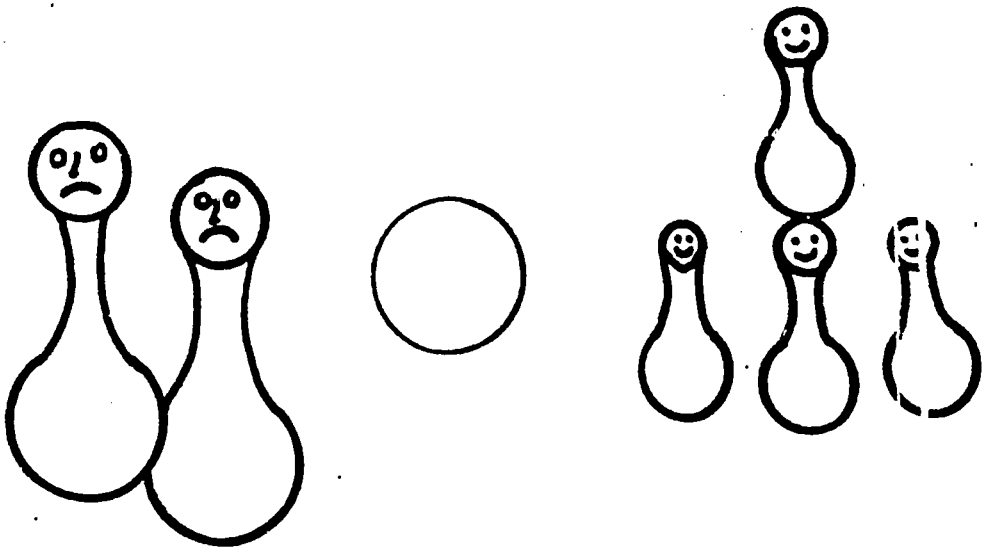
Fold

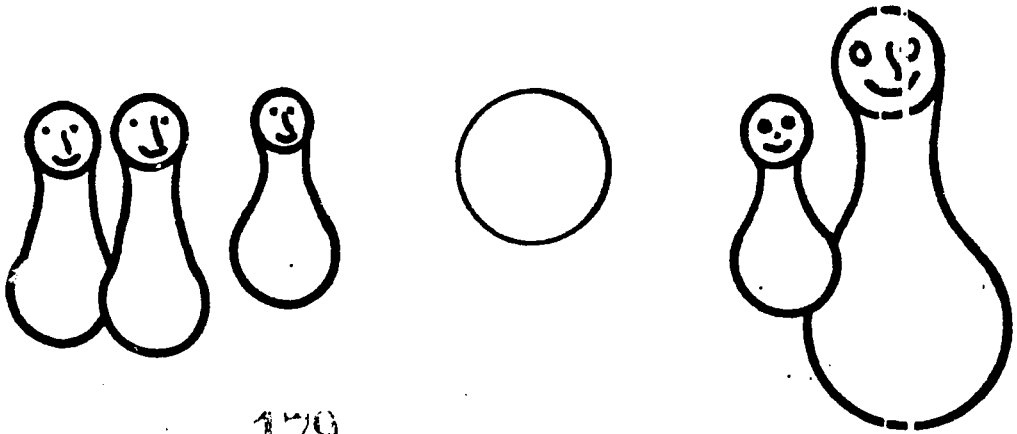
Clip

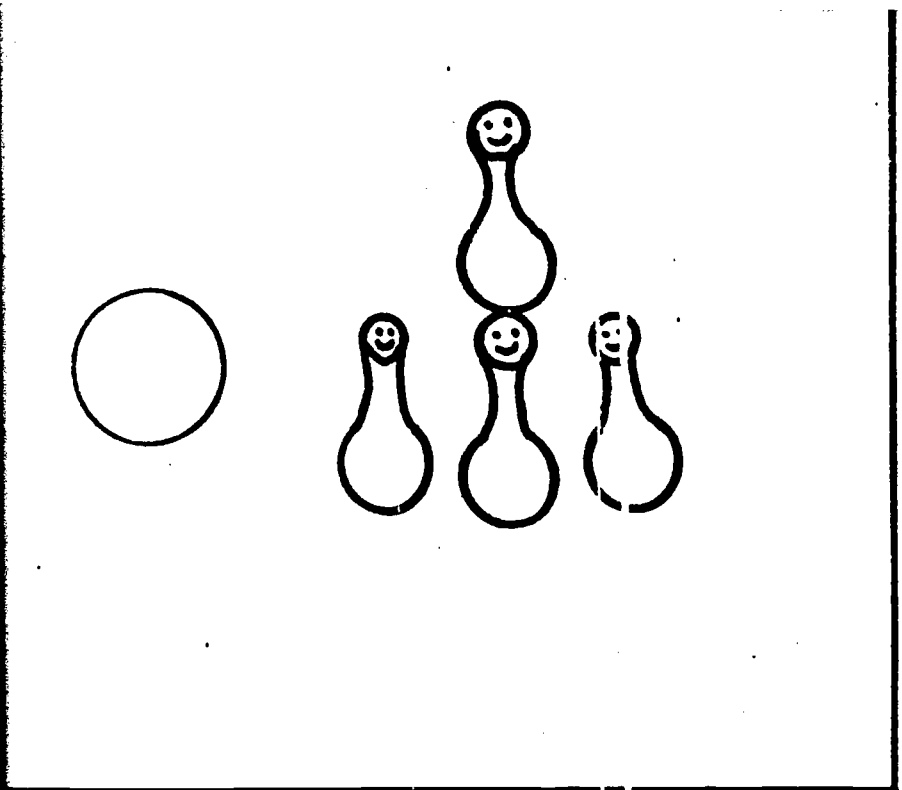
Dh 133

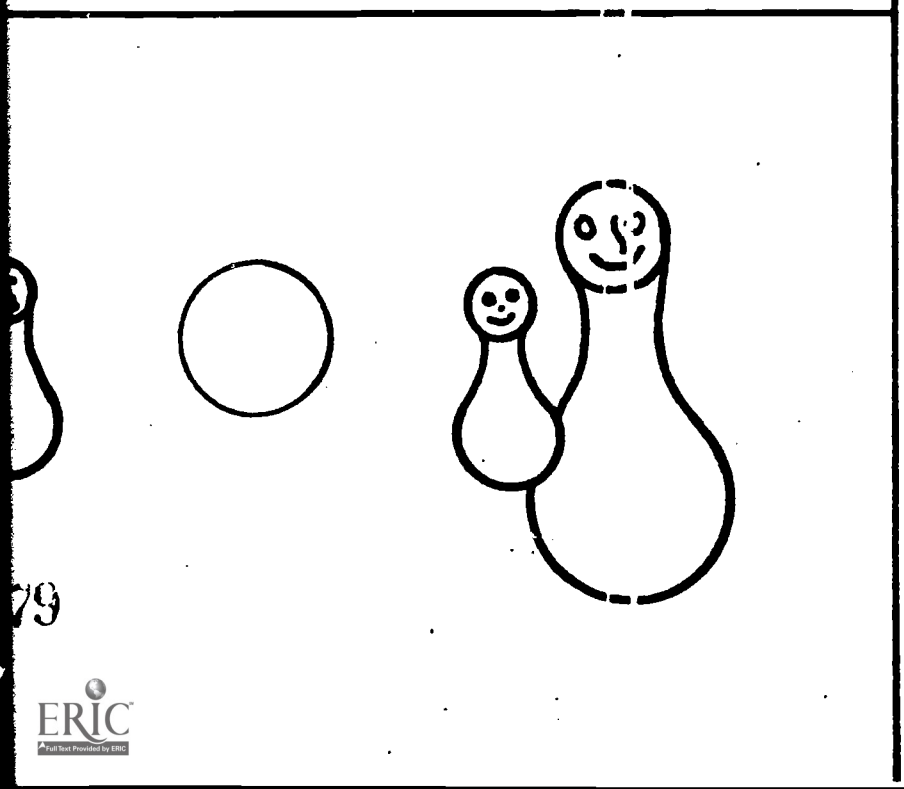
Fold

178









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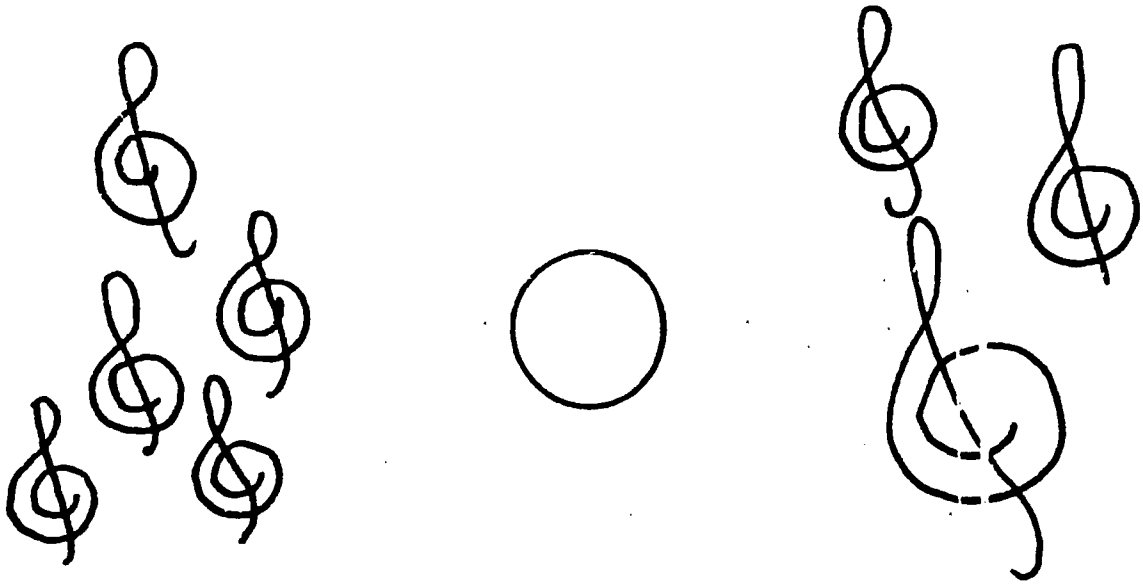
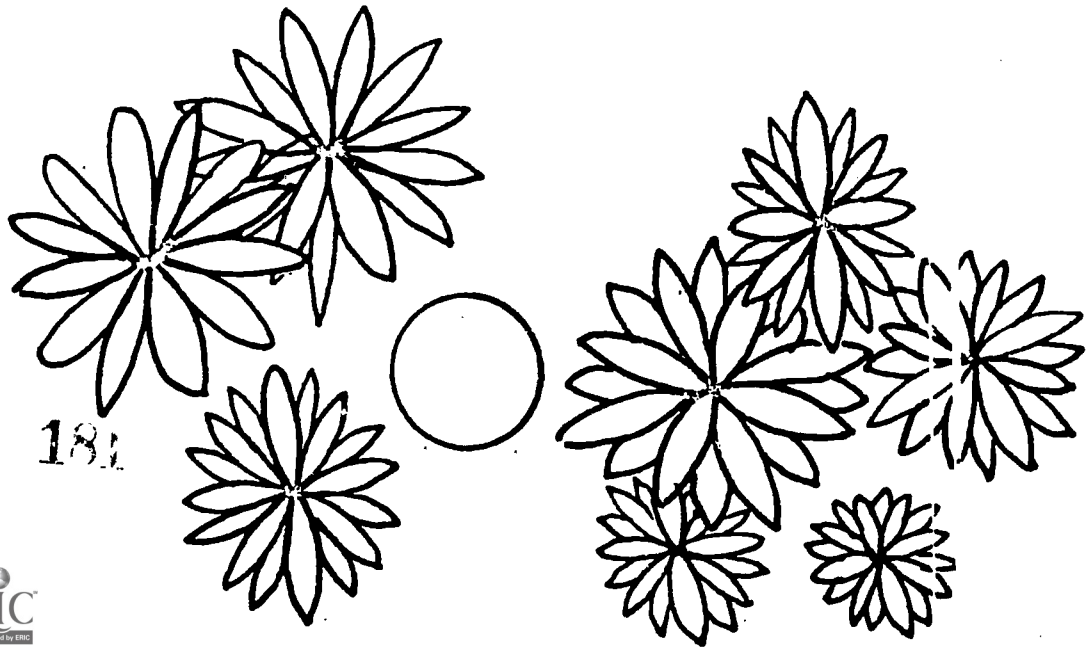
Dh 134

Fold



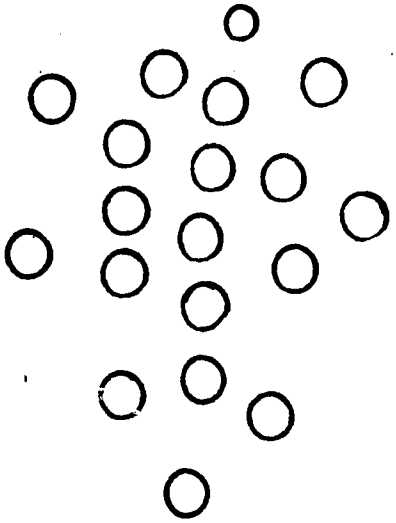


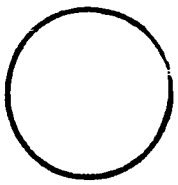
Fold

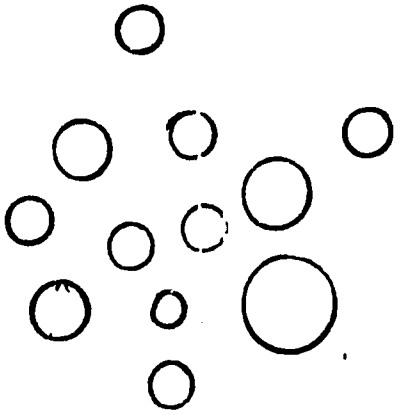
Clip

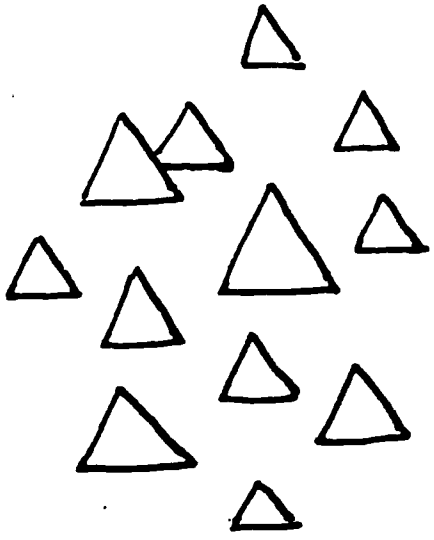
Dh 135

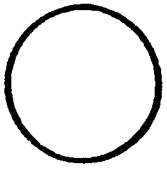
Fold

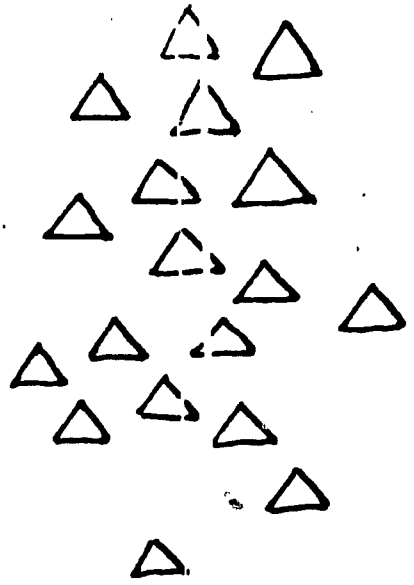










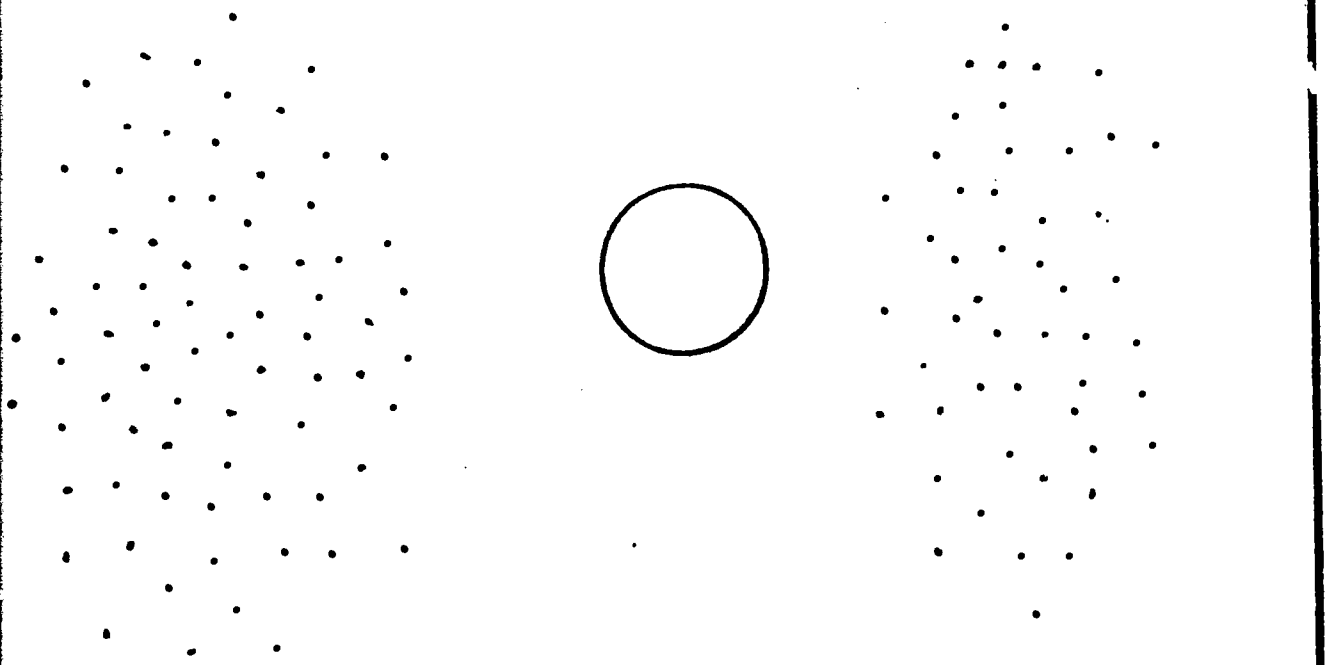


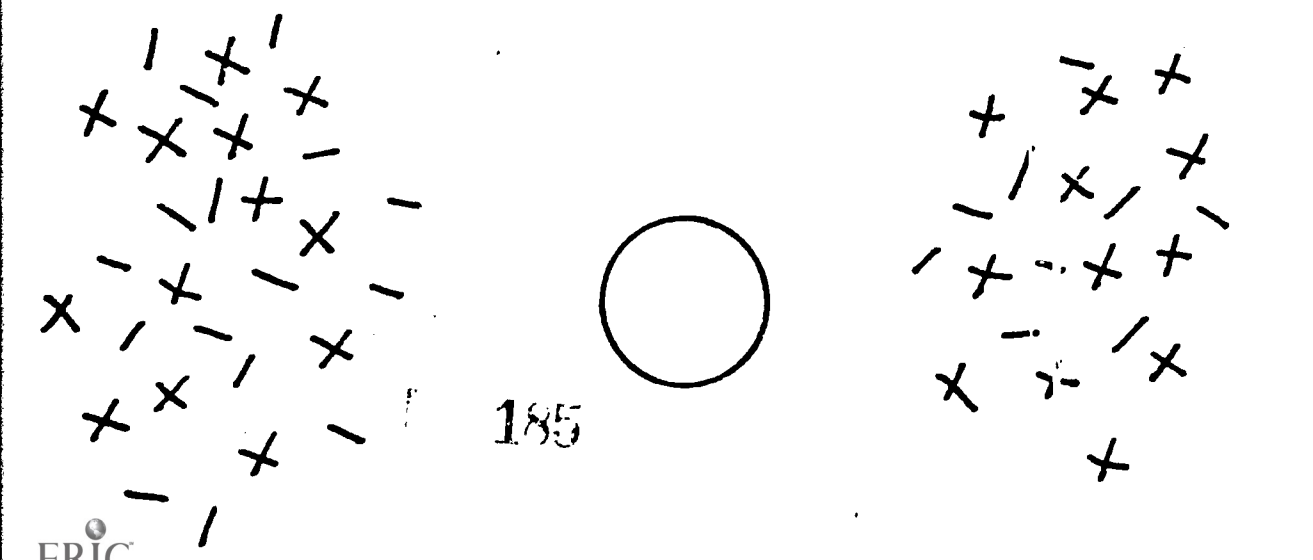
Fold

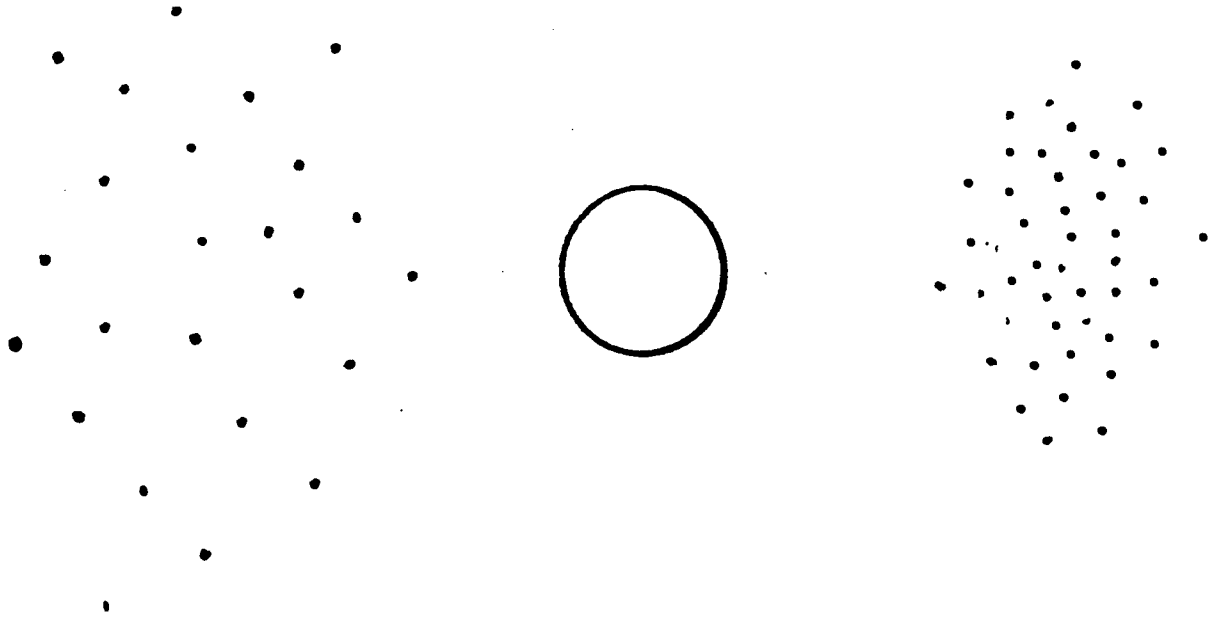
Clip

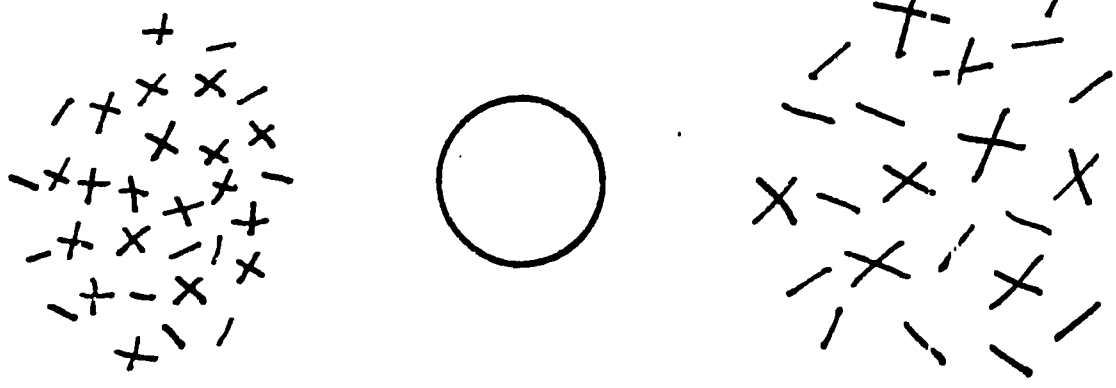
Dh 136

Fold









Fold

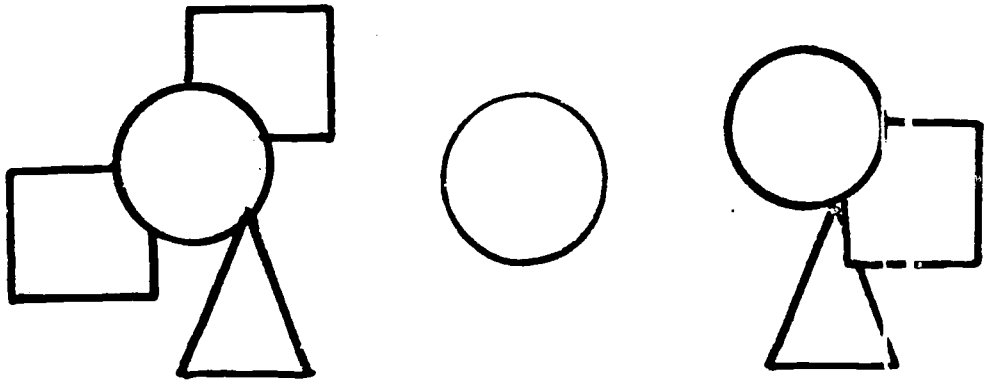
Clip

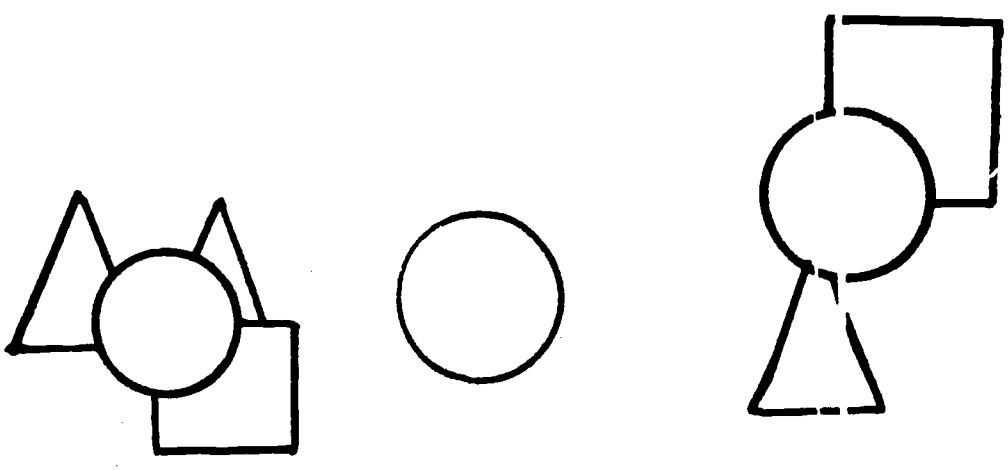
Fold

Dh 138

188

7





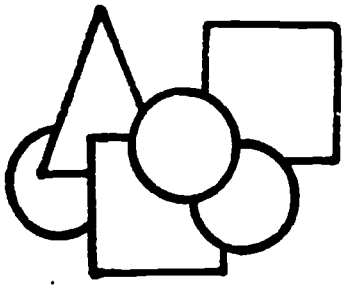
Fold

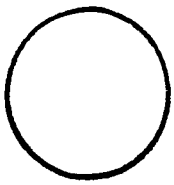
Clip

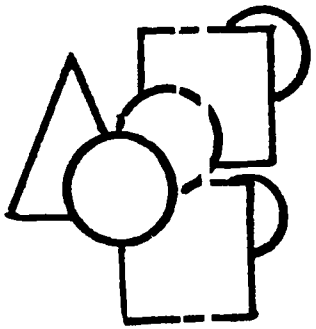
Fold

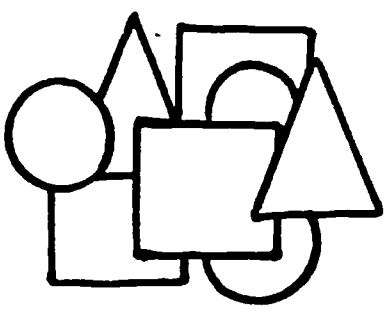
Dh 139

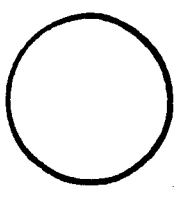
130

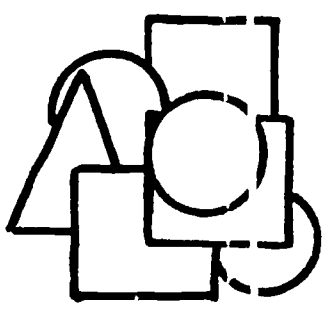










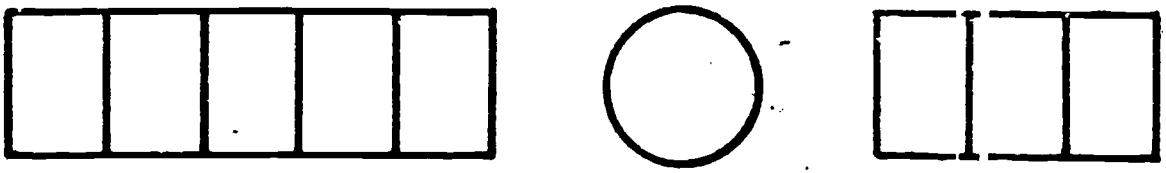


Fold

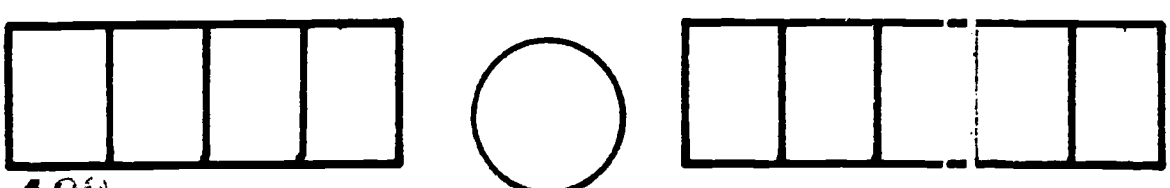
Clip

Dh 140

Fold



5 ○ 3



4 ○ 5

3

5

Fold

Fold

Clip

Dh 141

19

602

407

ERIC

02

07

Fold

Clip

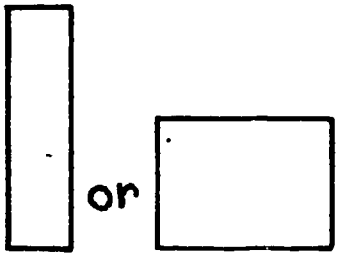
Dh 142

Fold

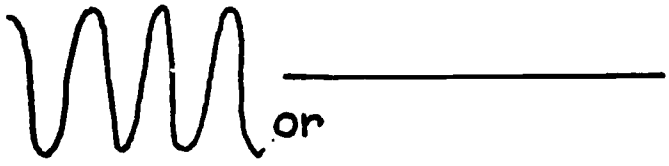
96

Which is the greater amount ?

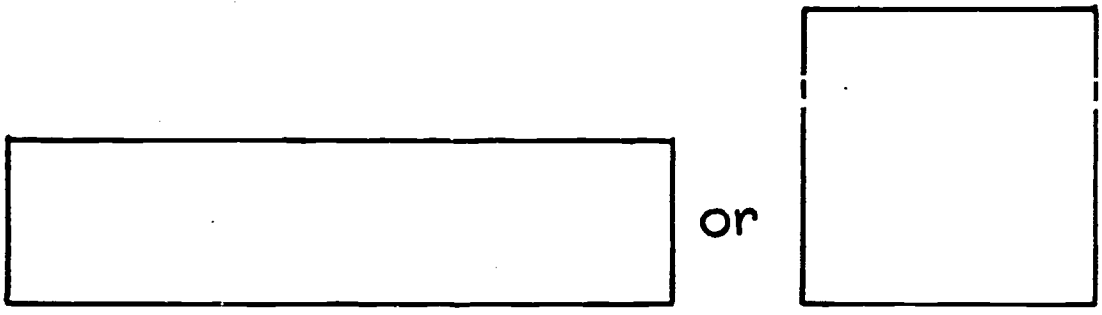
1.



2.



3.



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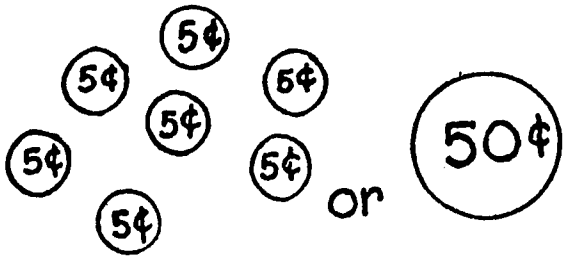

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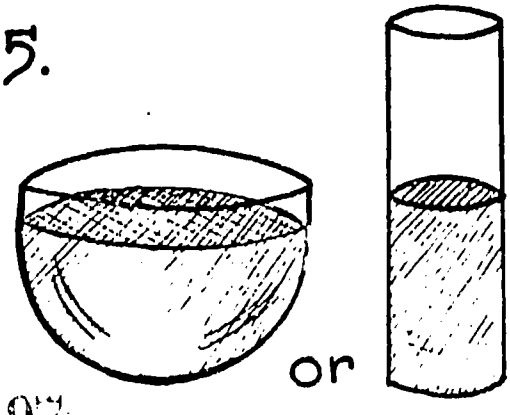


Section E

MISCELLANEOUS CURRICULUM SEQUENCES (GEOGRAPHY & SPELLING)

Almost any learning assignment can be sequenced. When a child is frustrated by a learning task that is too difficult for him to learn in one step -- sequence it. The two lessons included here are symbolic of the type of adoptation that must be made by a teacher to individualize a student's work.

The sequence on geography should start from what is already known and progress to the more global framework. A child who knows a local river, or city or county should be given materials to cover this concept then progress on to "Bay Area", "State", "Nation", "Continent", etc. In each one of these steps, the teacher should bring in as many familiar ideas as possible, such as State Flag, local products, rivers, etc.

Spelling can easily be sequenced, not only by difficulty of words, but also by associated or similar words and sounds. These lessons are intended to be symbolic of the type of creative work a teacher may construct to 'break down' learning units to small components.

Example a - pages 146 - 149
Spelling "enough"

Example b - pages 150 - 158
Geography

Learning to spell–

- enough
- though
- thought
- rough

Fill in the missing letters and check with the model if necessary.

enough

_nough

e_ough

enoug_

en_ugh

eno_gh

enou_h

enou_ _

en_ _ gh

_ _ ough

en_ _ _ _

e_____

_____h

Did you have _____

to eat?

Leave _____ time to

get back home.

(Follow the same procedure with the words "though," "thought," and "rough."

CURRICULUM SEQUENCE - GEOGRAPHY

DIRECTIONS: Each map should be reproduced without the filled-in detail. The maps are to be filled out by the students with the teacher. Numerous maps can be reproduced by states, regions and the entire United States. Each map can be dealt with according to states, capitols, important cities, products, rivers, state birds, trees, animals, etc.

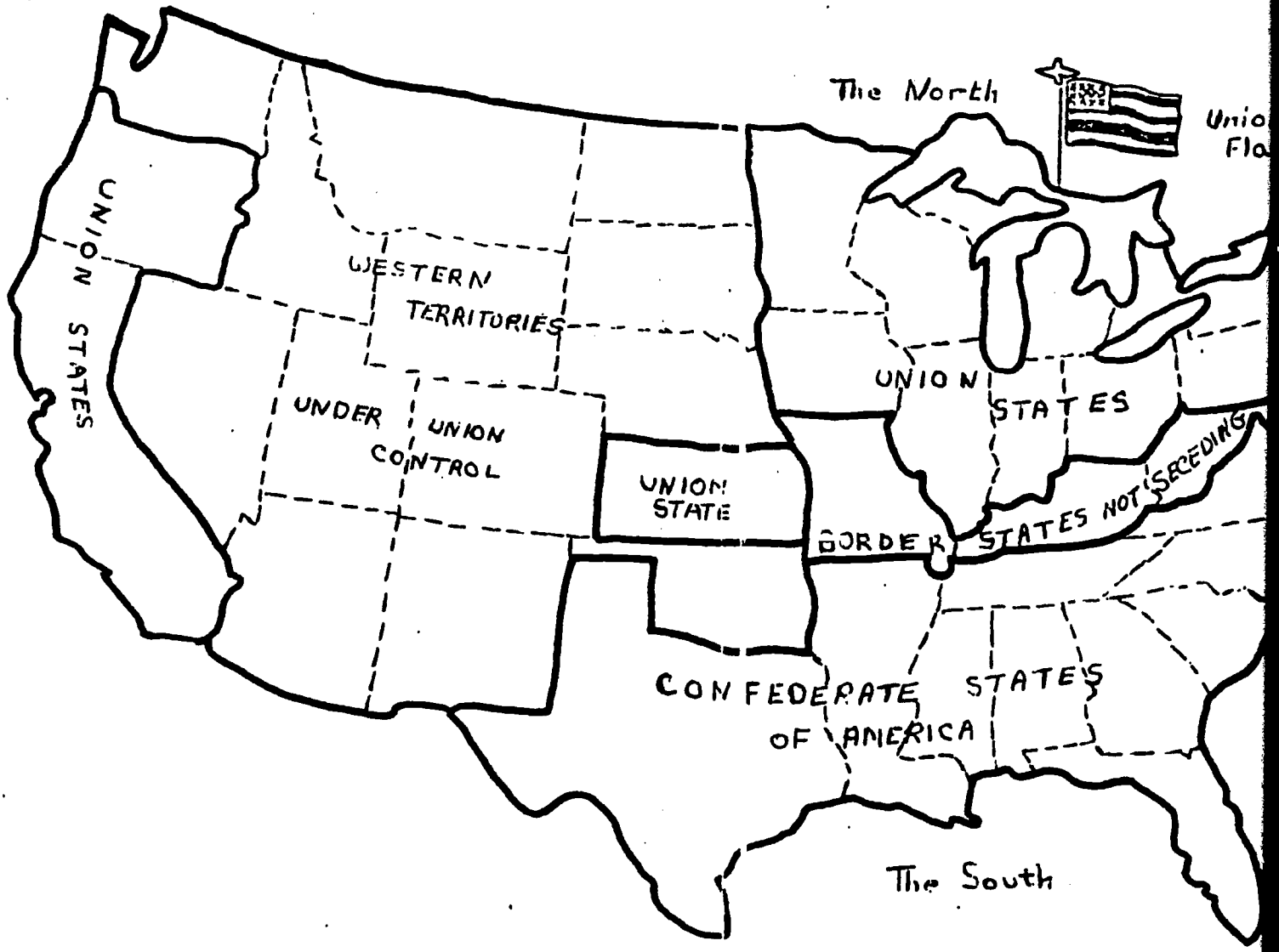
by
Paulette Butala

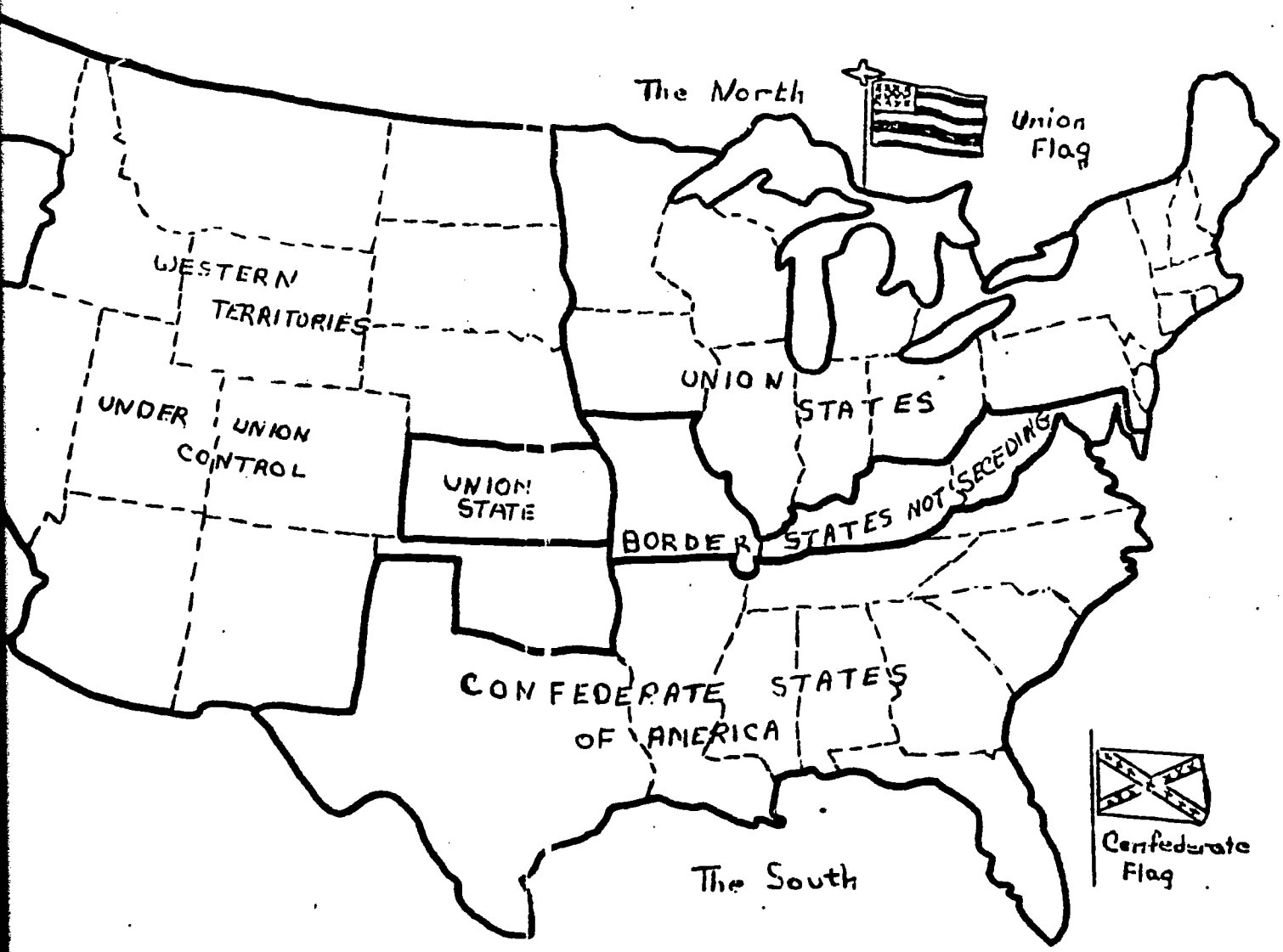
Eb 150

Washington
Montana
North Dakota
Minnesota
Michigan
Oregon
Idaho
Wyoming
South Dakota
Wisconsin
Michigan
New Yo
California
Nevada
Utah
Colorado
Nebraska
Iowa
Illinois
Indiana
Ohio
Pennsylvania
west
Virginia
Virginia
Kansas
Missouri
Kentucky
North Carolina
Tennessee
Arizona
New Mexico
Oklahoma
Arkansas
South
Carolina
Mississ
Alabama
Georgia
Texas
Louisiana
Florida

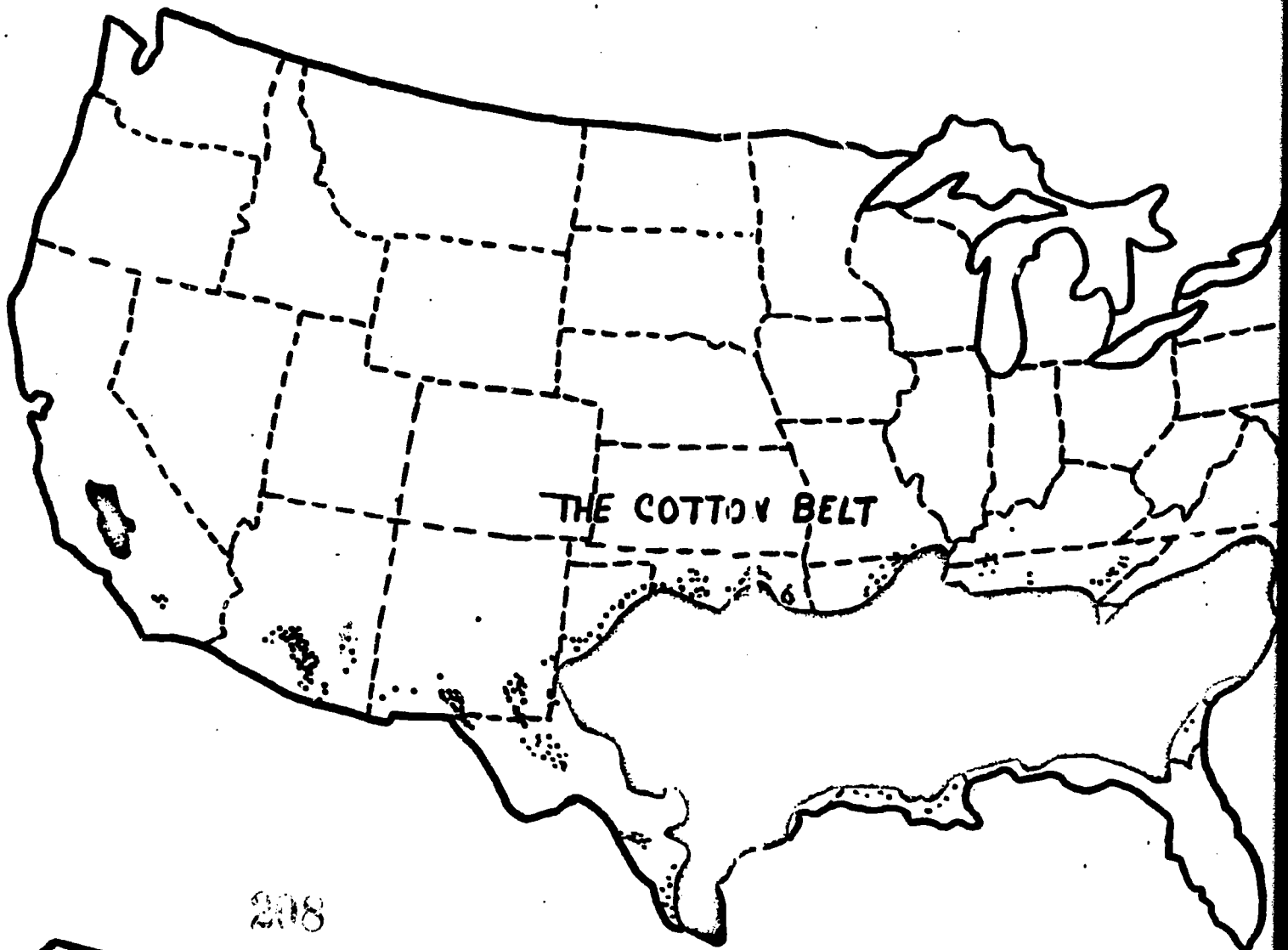
Montana
North Dakota
Minnesota
Michigan
Maine
VT.
N.H.
Idaho
Wyoming
South Dakota
Wisconsin
Michigan
New York
Mass.
Conn.
R.I.
Iowa
Pennsylvania
Nebraska
Indiana
Ohio
N.J.
Illinois
Md.
Utah
Colorado
West Virginia
Kansas
Missouri
Virginia
Kentucky
North Carolina
Tennessee
Arizona
New Mexico
Oklahoma
Arkansas
South Carolina
Mississippi
Alabama
Georgia
Texas
Louisiana
Florida

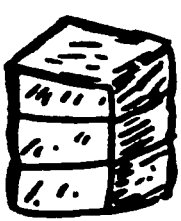
Ed 151


The North
Unio
Flo
UNION STATES
WESTERN TERRITORIES
UNDER UNION CONTROL
UNION STATE
UNION STATES
BORDER STATES NOT SECEDING
CONFEDERATE STATES OF AMERICA
The South


The North
Union Flag
WESTERN TERRITORIES
UNDER UNION CONTROL
UNION STATE
UNION STATES
BORDER STATES NOT SECEDING
CONFEDERATE STATES OF AMERICA
The South
Confederate Flag

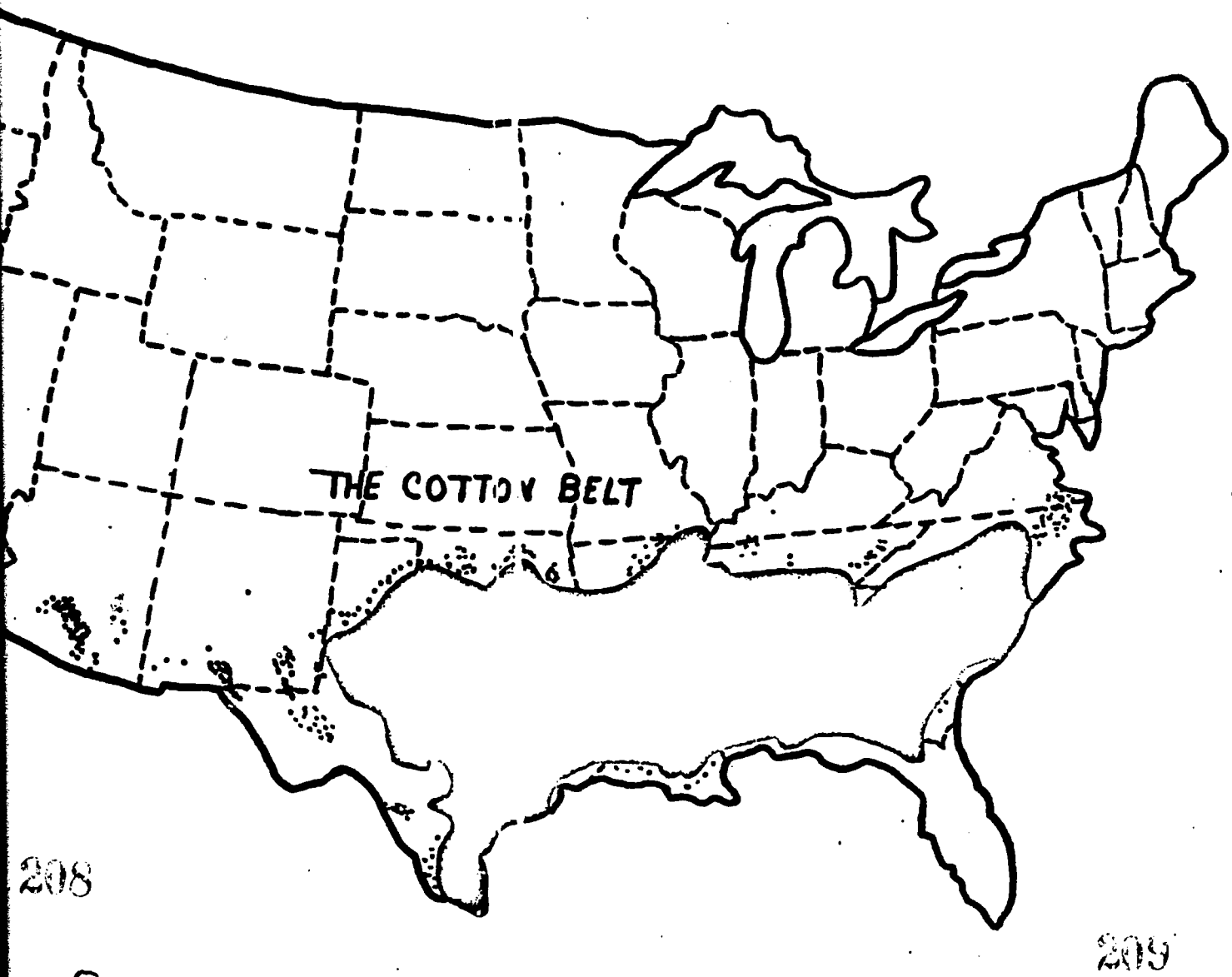
Eb 152





BALE OF COTTON

COTTON BOLL



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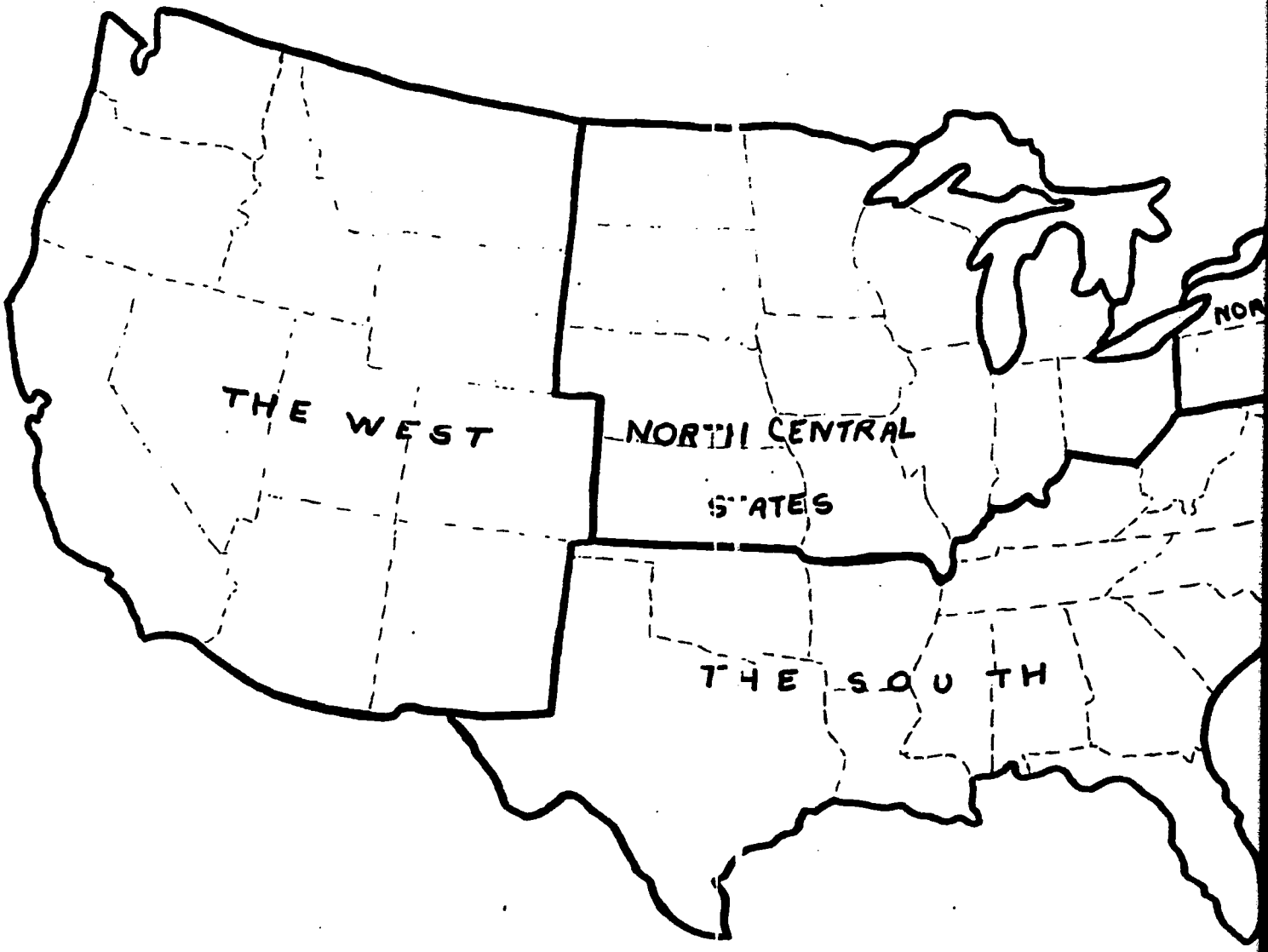
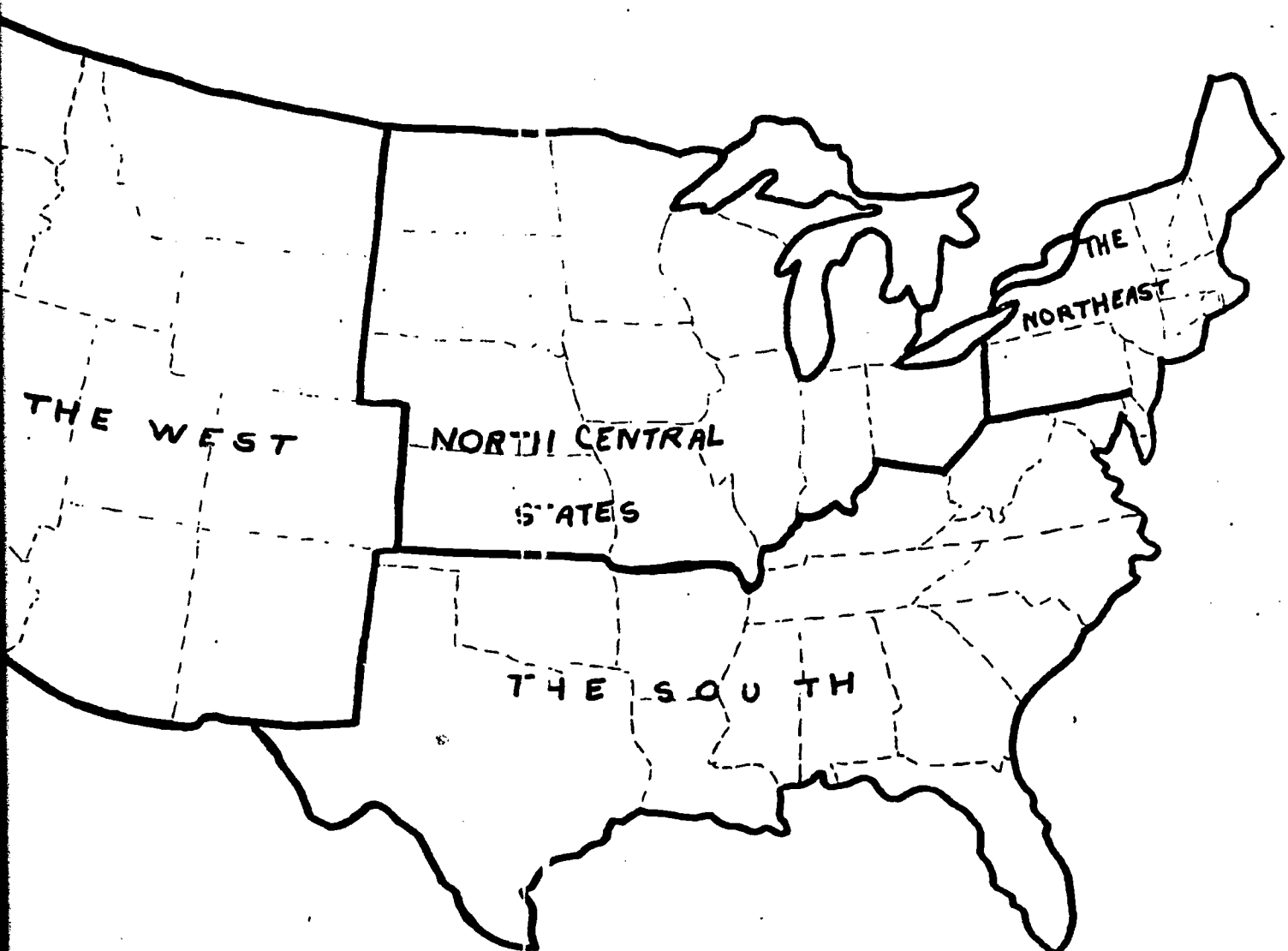
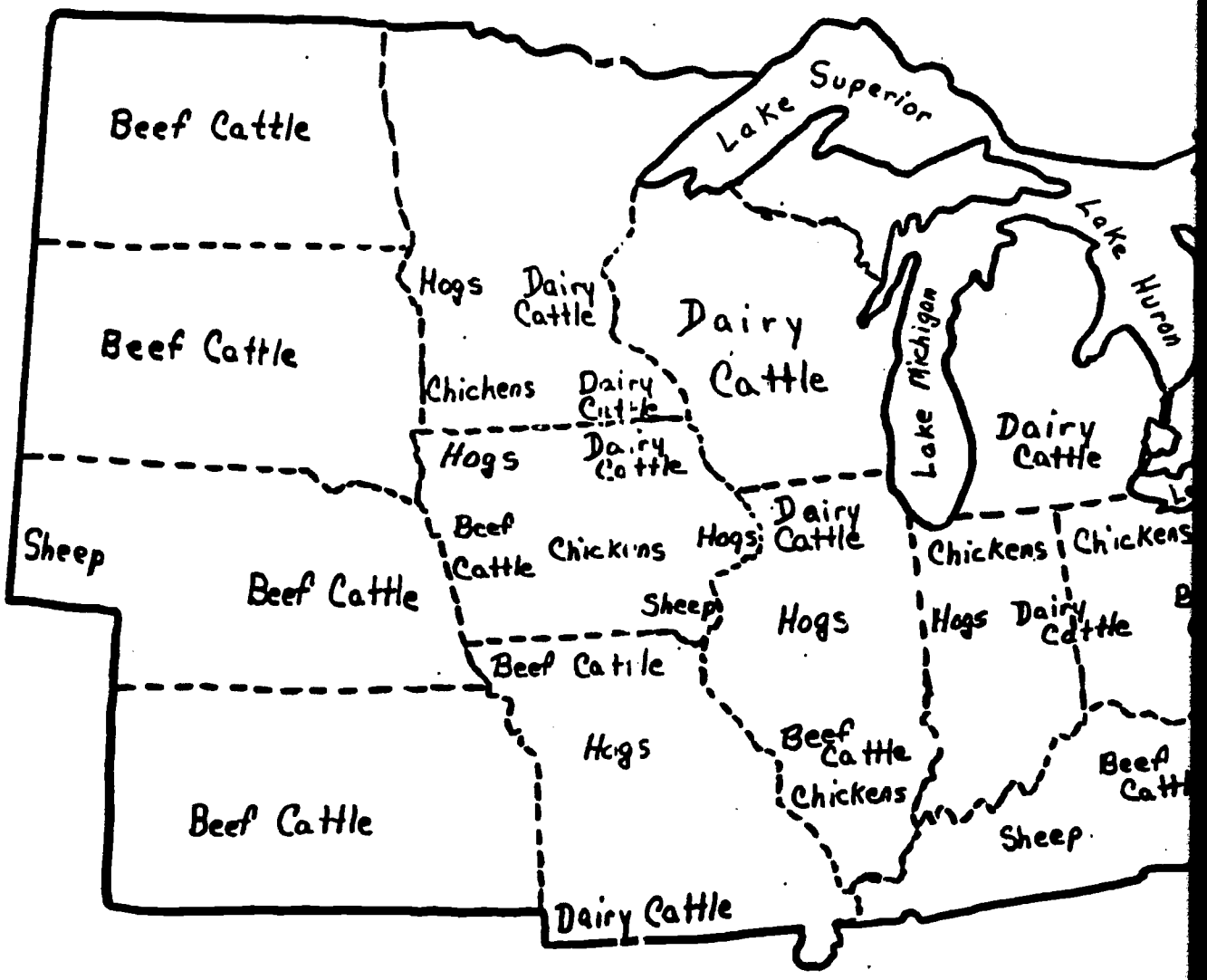
COTTON BOLL

Ed 153


THE WEST
NORTH CENTRAL
STATES
THE SOUTH

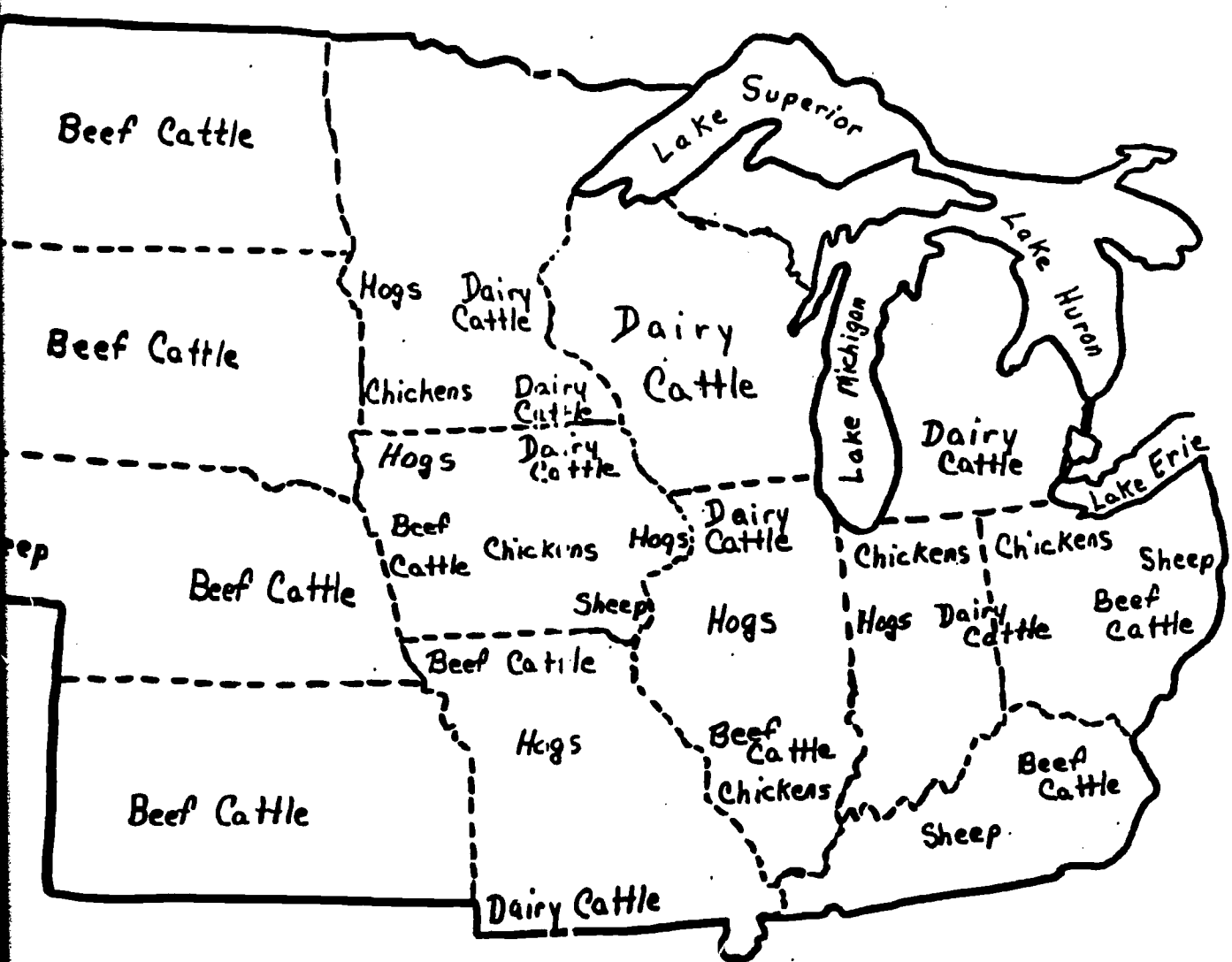


Ed 154



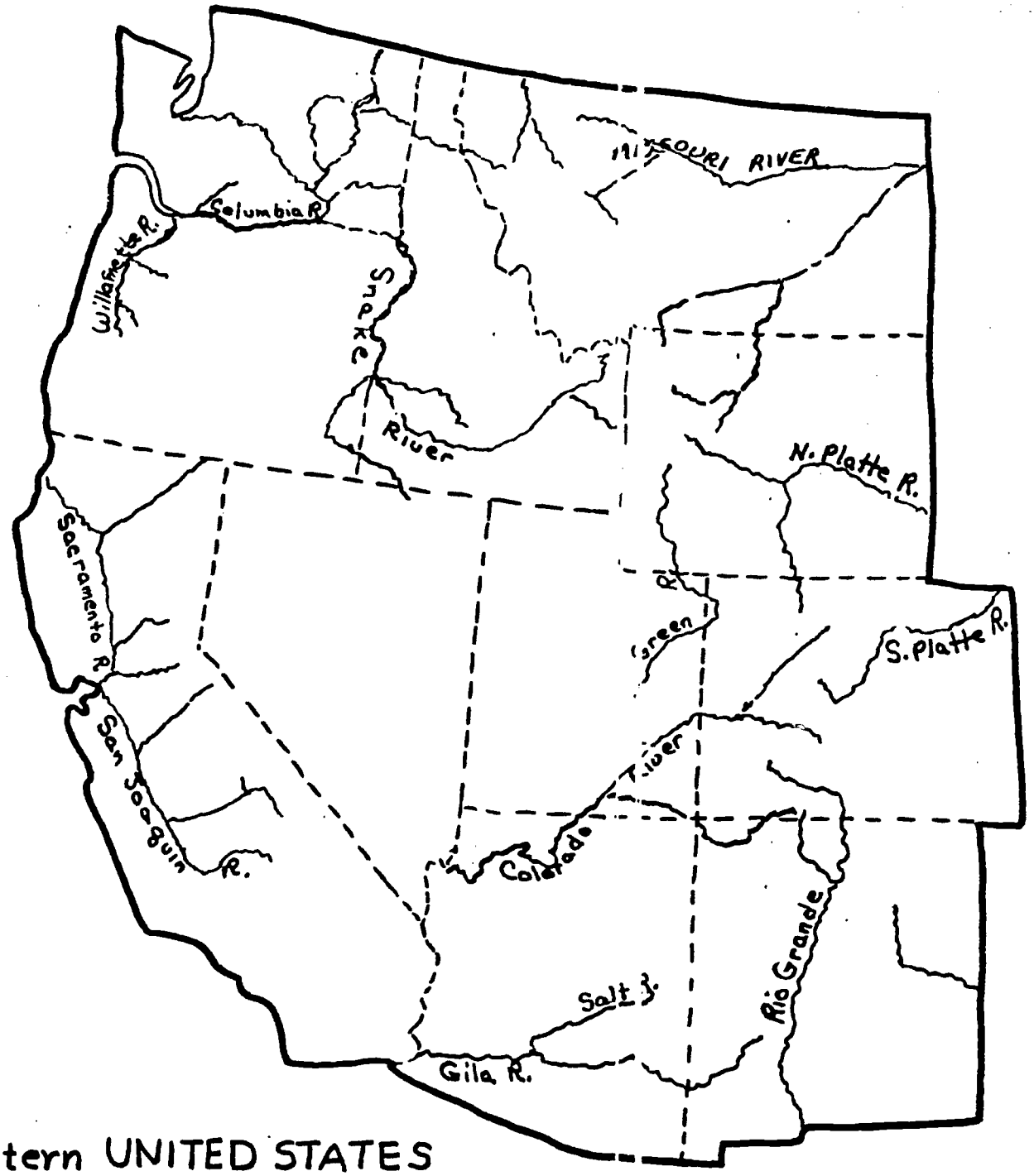
North Central UNITED STATES

Leading Farm Anim

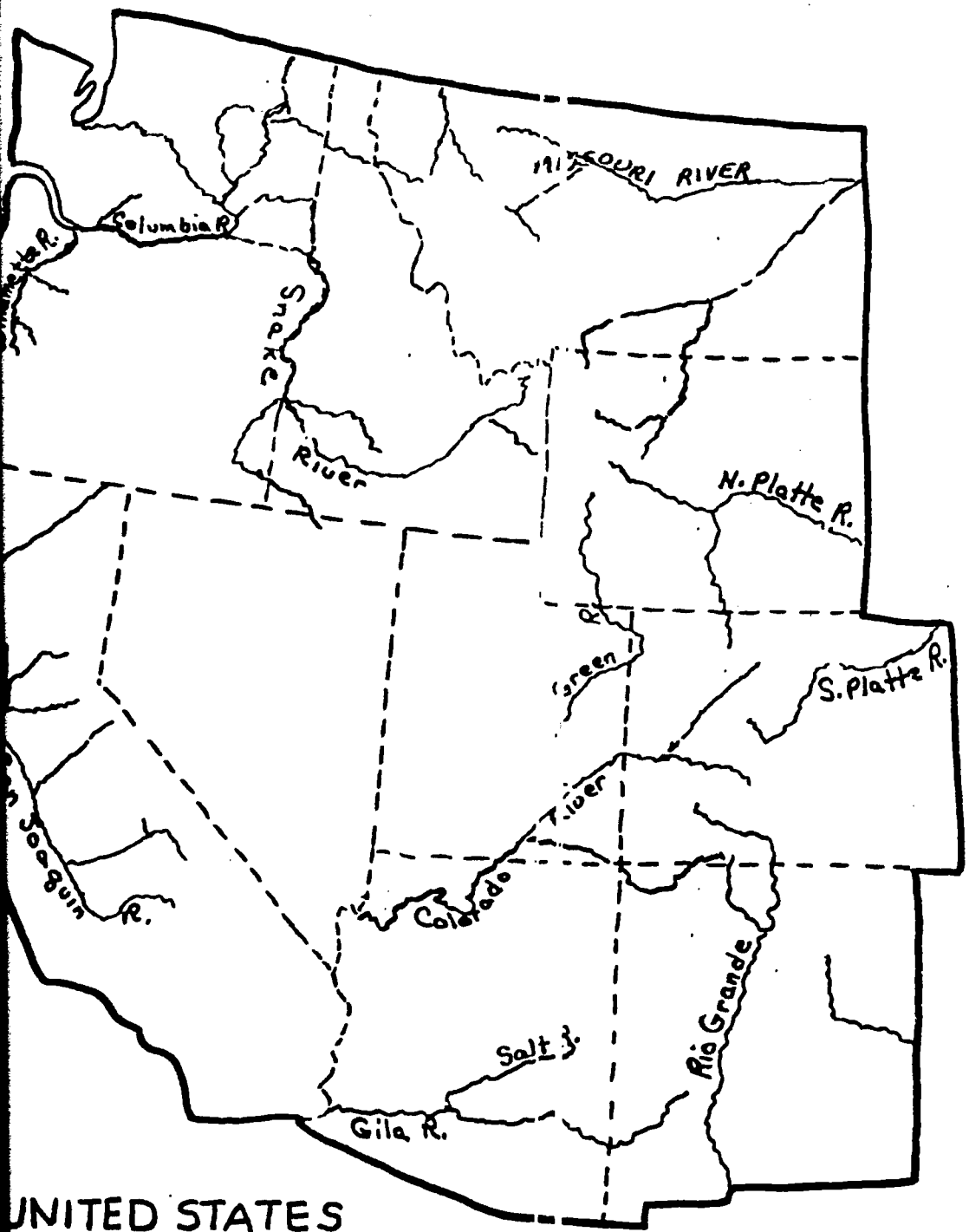


t--l UNITED STATES

Leading Farm Animals

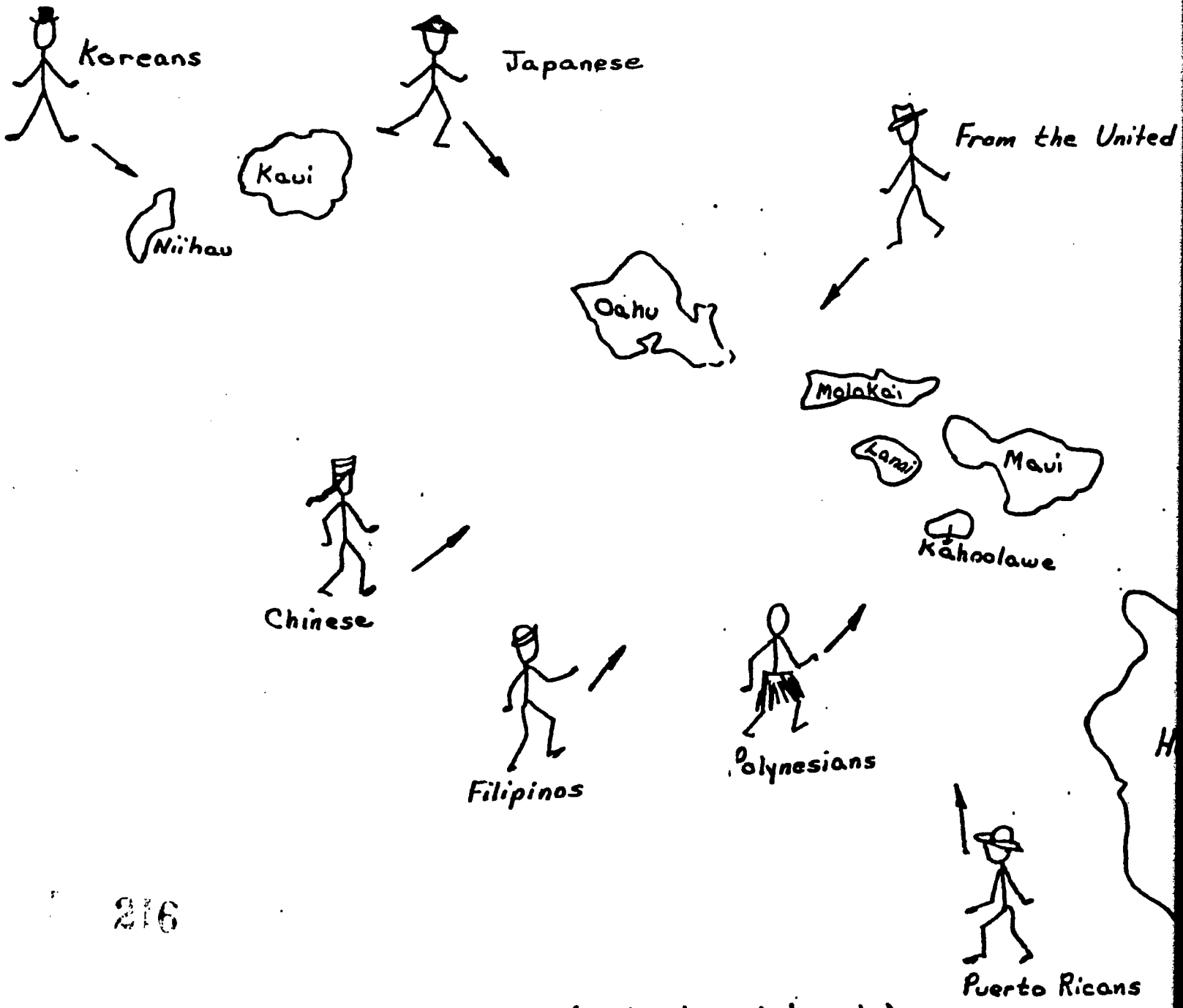


Western UNITED STATES
River System

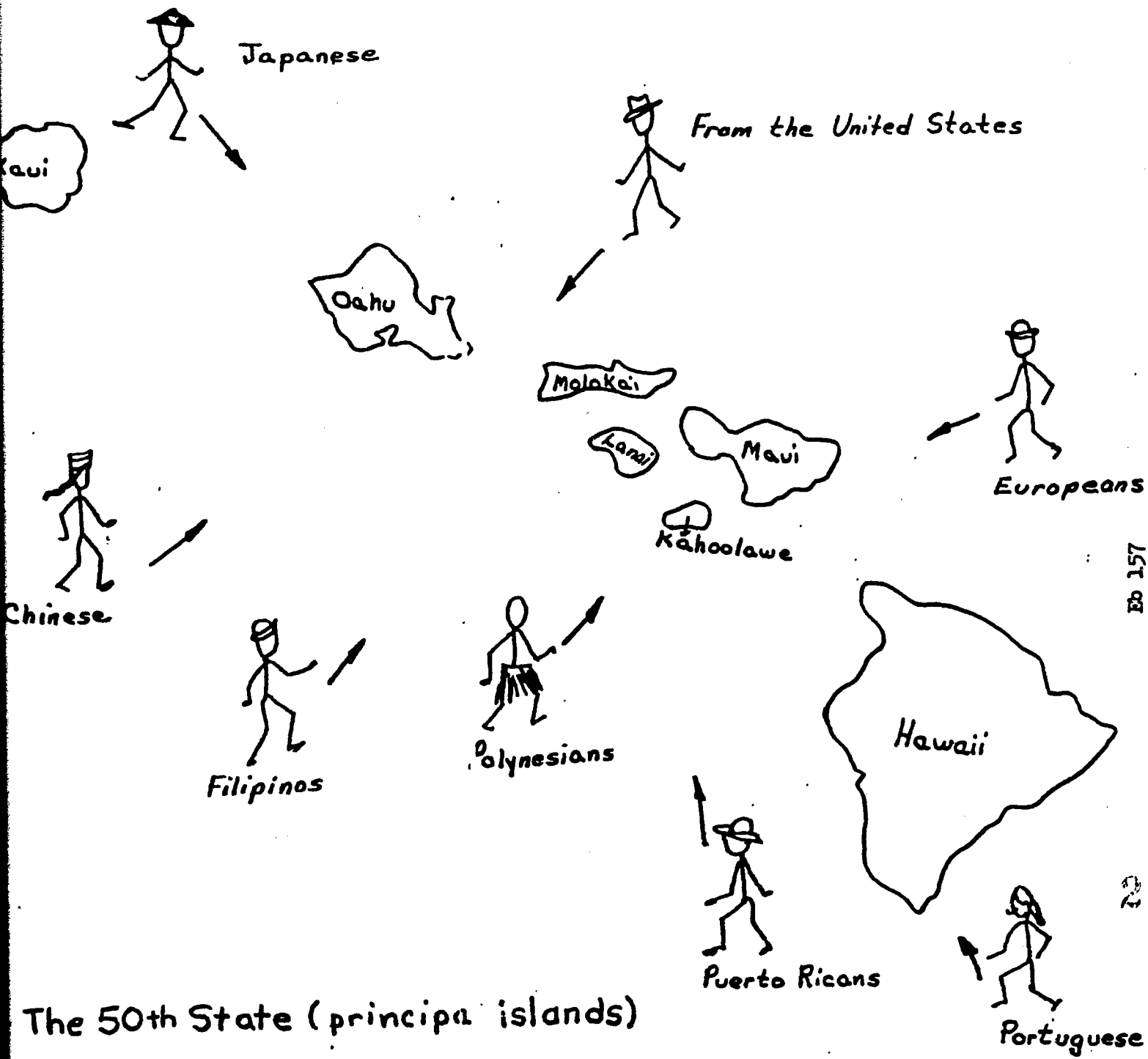


UNITED STATES

Eb 156



HAWAII - The 50th State (principa islands)



The 50th State (principa islands)

Ed 157

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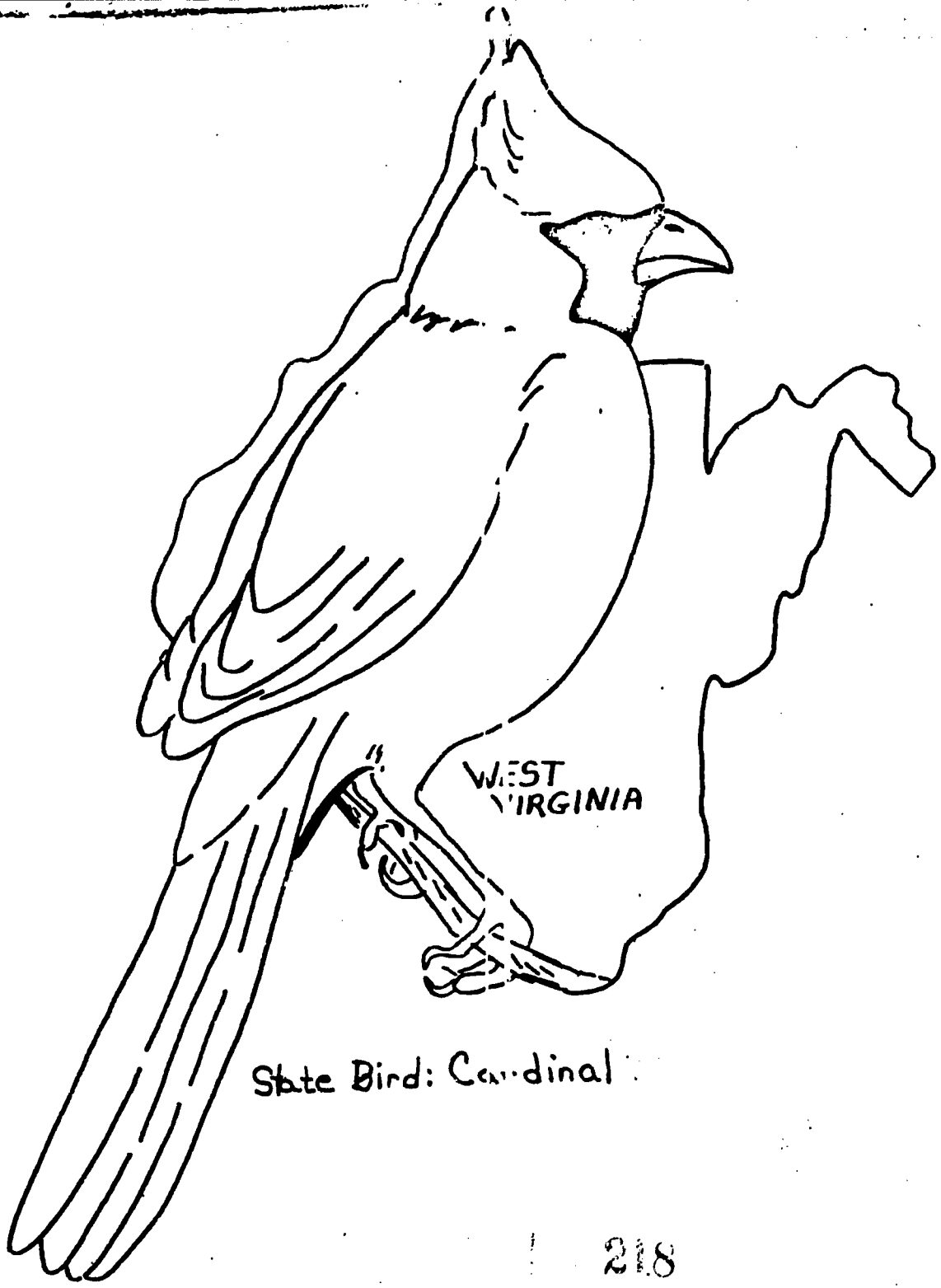

State Bird: Cardinal