ABSTRACT
         This set of mathematics instructional materials are
examples of how a teacher can integrate career education into math.
Six topics related to the career education concept are featured.
"Sample Math Problems" was written for a class studying about jobs in
a bakery, and the problems are ones that would be encountered in a
bakery. "Careers as Related to Math" is a sample of how career
education can be effectively correlated and integrated into math
texts (Elementary School Mathematics published by Addison-Wesley) for
grades 4, 5, and 6. Occupations requiring high school or college
education and/or on-the-job training are listed, and the concepts
required for most math-related occupations are itemized. Other
materials include an outline of concepts and enrichment materials to
be used along with the Addison-Wesley textbook. "Using Math in a
Department Store" is a sample lesson where the students not only
learn basic questions with fractions, but they also learn that these
skills are necessary to work in a department store. "Bricklayers Use
Multiplication" cites four multiplication work problems. "A 'Lube'
Man Uses Math" gives three job related math problems. "Do You Really
Need to Study Math?" is a brief project summary. (BP)

MATH

Contents:

POTTAWATTAMIE
COUNTY SCHOOL
SYSTEM

*

"An Intermediate
School District"

The Halverson Center for Education • Route 1
Council Bluffs, Iowa 51501

DR. CALVIN R. BONES, Supt.   TELEPHONE (712) 366-0503

CAREER EDUCATION: SAMPLE MATH PROBLEMS

Dear Teacher:

These math problems were written for a class who was studying about the jobs in a bakery. Problems could be written to fit the type of problems a class is studying.

This is a sample of how one can integrate career education into math. This shows how career education can be used to enhance the concepts one is teaching by making the subject matter more relevant to everyday life.

Sincerely,

Jacquelyn Crabtree
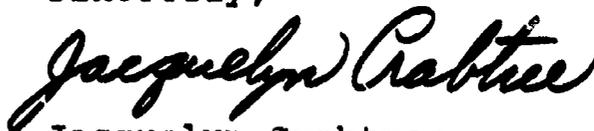
Jacquelyn Crabtree
Elementary Counselor
Department of Career Education

Math

1. Alice works for the bakery. She has a dozen rolls and she sells six of them to Mrs. Jones. How many rolls are left?

2. Mary needed three batches of bread dough to bake enough bread for one day. If one batch is mixed, how many more batches of dough does Mary need?

3. If the recipe for chocolate cookies that Mary is using will yield 72 cookies and Mary has baked 35, how many more cookies should she be able to make?

4. Joe had an order for 100 cupcakes. He has baked 73. How many more does he need to fill the order?

5. If Joan works at the bakery from 2:00 p.m. to 10:00 p.m. Monday through Friday, how many hours a day does she work? How many hours a week does she work?

6. The bakery received an order for three chocolate doughnuts, three glazed doughnuts, three cherry filled doughnuts, and six french doughnuts. How many doughnuts did this order ask for? How many dozen is this? If doughnuts are five cents each, how much will this order of doughnuts cost?

7. The bakery bakes 50 pies and sells each pie for 69¢. If it cost 40¢ to make each pie, how much money would the bakery make on each pie? How much money would the bakery make on all 50 pies.

Answers

1. 12 rolls minus 6 rolls leaves 6 rolls.

   $$12 - 6 = 6$$

2. $3 - 1 = 2$ batches of dough, so 2 batches of dough are still needed.

3. $\begin{array}{r} 72 \\ -35 \\ \hline 37 \end{array}$

4. $\begin{array}{r} 100 \\ -73 \\ \hline 27 \end{array}$ cupcakes (he needs 27 more cupcakes to fill the order)

5. $\begin{array}{r} 10:00 \text{ p.m.} \\ 2:00 \text{ p.m.} \\ \hline 8 \end{array}$ The answer is 8 hours

   8 hours x 5 days = 40 hours a week

6. $\begin{array}{l} 3 \text{ chocolate} \\ 3 \text{ glazed} \\ 3 \text{ cherry filled} \\ 6 \text{ french} \\ \hline 15 \end{array}$ The order asked for 15 doughnuts.

   15 - 1-1/4 dozen (15 ÷ 12 = 1 and 3 13ft over or 3/12 = 1/4)

   At 5¢ a doughnut, the order will cost 15 x 5 or 75¢ (not figuring tax).

7. 69¢ - 40¢ = 29¢ profit on each pie

   Since the bakery makes 29¢ on one pie, it would make 29¢ x 50 or $14.50 profit on all 50 pies.

CAREERS AS RELATED TO MATH

By:

Phyllis VanFossan
6th Grade Teacher
Lake Elementary School
Council Bluffs Schcol System
Council Bluffs, Iowa

Career Education Workshop
March 6-17, 1972

April 28, 1972

Dear Teacher:

This material was developed during a career education work-shop conducted by the Pottawattamie County School System and the Council Bluffs Community School System on March 6-17, 1972.

This material was written by Phyllis VanFossan, an elementary teacher in the Council Bluffs Community School System in Council Bluffs, Iowa. Phyllis has coordinated career educa-tion materials with the basic math text for the Council Bluffs School System* for grades fourth, fifth and sixth.

This is a sample of how career education can be effectively correlated and integrated into math texts. The use of the career education materials in mathematics makes the subject matter more relevant to the students.

The approach that Phyllis has used here could be used with any math textbook series at any grade level.

Jacquelyn Crabtree

Jacquelyn Crabtree
Elementary Counselor
Department of Guidance and
 Vocational Education
Director of Career Education
 Workshop

* The basic textbook math series in the Council Bluffs School System is the Elementary School Mathematics by Addison-Wesley.

VI

CAREERS AS RELATED TO MATH

by
Phyllis VanFossan

I. Occupations requiring high school education **and/or on-the-job**
    training:

       Carpenter
       Mechanic
       Electrician
       All-round Machinist
       Farmer
       Insurance Agent
       Waitress or Waiter
       Beauty Opertor
       Barber
       Cashier
       Salesman
       Real Estate Salesman
       Bookkeeper
       Telephone Operator
       Shipping - Receiving Clerk
       Postal Clerk
       Bank Teller
       Computer Programmer
       Surveyor
       Interior Decorator
       Draftsman
       Pilot
       Laboratory Technician
       Musician
       Accountant
       Auditor
       Various military careers

II. Occupations requiring college education:

Statistician
Actuary
Geologist
Architect
Teacher
Astronaut
Librarian
Doctor
Nurse
Optometrist
Pharmacist
Airline Pilot

III. Concepts required for most math-related occupations

A. Addition and subtraction

    1. Strive for accuracy

B. Bases - especially bases two and eight as related to computers

C. Understanding money - especially being able to make change quickly and accurately

D. Scale drawing - as applied to drawing blueprints

E. Geometry

F. Decimals

G. Measuring

H. Seeing differences; e.g., small-large, near-far

I. Banking procedures

IV. Careers and Math in Grade Four

   A. Materials and/or resources

      Elementary School Mathematics, Addison-Wesley

   B. Chapter Two

      1. Concepts: Addition and subtraction concepts, money-
                    dollar and decimal-point notation, and
                    seeing universal relationships

      2. Enrichment materials*

         a. Records: RC-366, "A Man's Work"
                      Airline Ticket Agent
                      Grocery Checker
                      Gas Station Salesman

         b. Filmstrips: FS-686, Dollars and Cents
                         (Anything suitable to addition and
                         subtraction)

         c. Films: S-321, Arithmetic in the Food Store
                    S-256, More and Less

         d. Kit 32, Spinner Games (whole numbers)

   C. Chapter Three

      1. Concepts: Multiplication and division concepts

      2. Enrichment materials*

         a. Records: RC-366, "A Man's Work"
                      Baker
                      Foundry Worker
                      Carpenter
                      Tailor

         b. Filmstrips: FS-204, Story of Linear Measurement

         c. Films: S-316, Measurement in the Food Store
                    S-626, Story of Weights and Measures

*Enrichment materials are available from Halverson Center for
 Education.

V. Careers and Math in Grade Five

A. Materials and/or resources

Elementary School Mathematics, Addison-Wesley

B. Chapter One

1. Concepts: Seeing differences and work with other bases

2. Enrichment materials*

a. Records: RC-366, "A Man's Work"
Data Processor

b. Filmstrips: Anything relevant to big and little
numbers or computers and their
place in occupations

c. Films: S-951, Computers

C. Chapter Five

1. Concepts: Geometry and measuring

2. Enrichment materials*

a. Records: RC-366, "A Man's Work"
Carpenter
Tailor
Pattern Maker

b. Filmstrips: FS-204, Story of Linear Measurement

c. Films: Anything related to geometry and a career
that makes use of it

D. Chapter Six

1. Concepts: Addition and subtraction concepts, multipli-
cation and division concepts, money

2. Enrichment materials*

a. Records: RC-366, "A Man's Work"
Airline Ticket Agent
Gas Station Salesman
Grocery Checker

b. Filmstrips: FS-151, Percentage and Using Money
FS-686, Dollars and Cents

*Enrichment materials are available from Halverson Center for
Education.

c. Films: S-321, Arithmetic in the Food Store

d. Kit 32, Spinner Games (whole numbers)

E. Chapter Eight

1. Concepts: Fraction concepts, experience with equivalent fractions

2. Enrichment materials*

a. Records: RC-366, "A Man's Work"
   Baker
   Foundry Worker
   Tool and Die Maker
   Carpenter
   Electrician
   Aircraft Refueler
   Tailor
   Pattern Maker
   Telephone Repairman

b. Filmstrips: FS-280, Scale Drawings and Tables

c. Films: Any film related to fractions and their relation to the "world of work"

d. Kit 33, Spinner Games (fractions)

F. Chapter Eleven

1. Concepts: Decimals - using decimals in measurement; using notation for money to decimal notation; addition and subtraction of decimals

2. Enrichment materials*

a. Records: RC-366, "A Man's Work"
   Airline Ticket Agent
   Grocery Checker
   Gas Station Salesman.
   Plumber
   Electrician
   Long-haul Truck Driver

b. Filmstrips: FS-148, Decimal Fractions and Reading Instruments

c. Films: S-795, Percent - Why and How

*Enrichment materials are available from the Halverson Center for Education.

VI. Careers and Math in Grade Six

A. Materials and/or resources

Elementary School Mathematics, Addison-Wesley

A Teaching Unit on Banking**

Road Map Math**

Area Measurement**

B. Chapter One

1. Concepts: Place value, reading and writing large numbers, bases other than ten, exponents and powers of ten, and expanded notation using exponents

2. Enrichment materials*

   a. Records: RC-366, "A Man's Work"
      Data Processor
      Electrician
      Meter Reader

   b. Filmstrips: Any filmstrip related to large numbers, exponents or bases other than ten, and the "world of work"

   c. Films: S-951, Computers
      S-256, More and Less

C. Chapter Three

1. Concepts: Review of addition, subtraction, multiplication and division; money problems; time, rate and distance

2. Enrichment materials*

   a. Records: RC-366, "A Man's Work"
      Airline Ticket Agent
      Grocery Checker
      Gas Station Salesman
      Long-haul Truck Driver

** Available from Mr. Duane Lewis, Coordinator of Mathematics
   Council Bluffs School System
   207 Scott Street
   Council Bluffs, Iowa (51501)

* Enrichment materials are available from the Halverson Center
   for Education.

b. Filmstrips: FS-686, Dollars and Cents

        c. Kit 32, Spinner Number Games (whole numbers)

        d. Films: S-321, Arithmetic in the Food Store

        e. Pamphlets: Road Map Math**

                        A Teaching Unit on Banking**

    D. Chapter Five

        1. Concepts: Geometry and measurement; area and perimeter;
                       and segments, angles, and triangles

        2. Enrichment materials*

            a. Records: RC-366, "A Man's Work"
                          Foundry Worker
                          Carpenter
                          Telephone Repairman

            b. Filmstrips: FS-204, Story of Linear Measurement

            c. Films: Any film that relates geometry and
                        measurement to the "world of work"

            d. Pamphlets: Area Measurement**

    E. Chapter Six

        1. Concepts: Fractions - equivalent fractions, transition
                       from fractions to numbers

        2. Enrichment materials*

            a. Records: RC-366, "A Man's Work"
                          Baker
                          Foundry Worker
                          Tool and Die Maker
                          Carpenter
                          Plumber
                          Tailor

            b. Filmstrips: Any relating fractions to careers

            c. Films: S-316, Measurement in the Food Store

            d. Kit 33, Spinner Games (fractions)

** Available from Mr. Duane Lewis, Coordinator of Mathematics
   (See page 6)

* Enrichment materials are available from the Halverson Center
  for Education.

F. Chapter Ten

1. Concepts: Decimals - fractions and decimals, addition
              and subtraction of decimals, decimals and
              money notation, scientific notation

2. Enrichment materials*

    a. Records: RC-366, "A Man's Work"
                  Airline Ticket Agent
                  Grocery Checker
                  Gas Station Salesman
                  Banker
                  Electrician

    b. Filmstrips: FS-148, Decimal Fractions and
                     Reading Instruments

                     FS-151, Percentage and Using Money

    c. Films: S-321, Arithmetic in the Food Store
                S-795, Percent - Why and How

    d. Pamphlets: Teaching a Unit on Banking**

    e. Kit 33, Spinner Games (fractions)

G. Chapter Twelve

1. Concepts: Percent - notation for percent; graphs and
              diagrams; interest

2. Enrichment materials*

    a. Records: RC-366, "A Man's Work"
                  Banker
                  Electrician
                  Telephone Repairman

    b. Filmstrips: FS-151, Percentage and Using Money
                     FS-280, Scale Drawings and Tables

    c. Films: S-795, Percent - Why and How

    d. Pamphlets: Teaching a Unit on Banking**

*Enrichment materials are available from the Halverson Center
 for Education.

SOURCES FOR CAREER MATERIAL

Employment Outlook for Accountants
Bulletin No. 1550-1
U. S. Department of Labor
Bureau of Labor Statistics
U. S. Government Printing Office
Washington, D. C. 20402

Employment Outlook for Architects
Bulletin No. 1550-5
U. S. Department of Labor
Bureau of Labor Statistics
U. S. Government Printing Office
Washington, D. C. 20402

Employment Outlook for Automobile Service and Sales
Occupations; Automobile, Truck and Bus Mechanics; Body
Repairmen; Painters; Upholsterers; Gas Station Attendants;
Salesmen; Parts Countermen; Service Advisors
Bulletin No. 1550-6
U. S. Department of Labor
Bureau of Labor Statistics
U. S. Government Printing Office
Washington, D. C. 20402

Career Opportunities in Aviation
National Aerospace Education Council
Room 616 Shoreham Building
806 15th Street, N. W.
Washington, D. C. 20005

Employment Outlook for Bookkeeping Workers, Office
Machine Operators
Bulletin No. 1550-19
U. S. Department of Labor
Bureau of Labor Statistics
U. S. Government Printing Office
Washington, D. C. 20402

SOURCES FOR CAREER MATERIAL

Jobs in Building Construction Trades
Science Research Associates, Inc.
250 E. Erie Street
Chicago, Illinois 60611

Employment Outlook for Commercial Artists, Industrial
Designers, Interior Designers and Decorators
Bulletin No. 1550-19
U. S. Department of Labor
Bureau of Labor Statistics
U. S. Government Printing Office
Washington, D. C. 20402

Employment Outlook for Earth Scientists, Geologists,
Geophysicists, Meteorologists, Oceanographers
Bulletin No. 1550-29
U. S. Department of Labor
Bureau of Labor Statistics
U. S. Government Printing Office
Washington, D. C. 20402

General Farmer
Chronicle Guidance Publications, Inc.
Moravia, New York

Food Store Workers
Science Research Associates, Inc.
259 E. Erie Street
Chicago, Illinois 60611

Employment Outlook for Lawyers
Bulletin No. 1550-45
U. S. Department of Labor
Bureau of Labor Statistics
U. S. Government Printing Office
Washington, D. C. 20402

Employment Outlook for Librarians
Bulletin No. 1550-46
U. S. Department of Labor
Bureau of Labor Statistics
U. S. Government Printing Office

Life Insurance Agent
Chronicle Guidance Publications, Inc.
Moravia, New York

Employment Outlook for Machining Occupations: Instrument
Makers, Machinists, Machine Tool Operators, Tool and Die
Makers, Setup Men, Layout Men
Bulletin No. 1550-47
U. S. Department of Labor
Bureau of Labor Statistics
U. S. Government Printing Office
Washington, D. C.   20402

A Career in Medicine, Neal H. Rosenthal
B'nai B'rith Vocational Service
1640 Rhode Island Avenue, N. W.
Washington, D. C.   20036

See Your Future in Pharmacy (Rev.)
American Pharmaceutical Association
2215 Constitution Avenue, N. W.
Washington, D. C.   20037

Dimensions of Veterinary Medicine
American Veterinary Medical Association
600 S. Michigan Avenue
Chicago, Illinois   60605

Employment Outlook for Technicians: Engineering and
Science, Draftsmen
Bulletin No. 1550-89
U. S. Department of Labor
Bureau of Labor Statistics
U. S. Government Printing Office
Washington, D. C.   20402

USING

MATH

IN

A

DEPARTMENT

STORE

By

Jacquelyn Crabtree

POTTAWATTAMIE
COUNTY SCHOOL
SYSTEM

*

"An Intermediate
School District"

The Halverson Center for Education • Route 1
Council Bluffs, Iowa 51501

DR. CALVIN R. BONES, Supt.

TELEPHONE (712) 366 0503

May 31, 1972

Dear Teacher:

This math lesson was written to illustrate how career
education can be integrated into math and how career
education can be used to make the subject matter more
relevant to the students.

In this lesson, the students not only learn basic
operations with fractions, but they also learn that
these skills are necessary to work in a department
store.

This sample lesson can be used as a guide for developing
others. The same method used here could be used to show
the relationship between math and any number of different
occupations.

If you're creative, imaginative and like to try new
ideas, try your hand at relating math skills to the
world of work. I think that you'll find it is an
exciting experience!

Sincerely,

Jacquelyn Crabtree
Elementary Counselor

USING MATH IN A DEPARTMENT STORE

By
Jacquelyn Crabtree
Elementary Counselor

Under the
Direction and Supervision
of
Earl E. Winters, Director
Department of Career Education
Pottawattamie County School System

May, 1972

USING MATH IN A DEPARTMENT STORE

Fractions are used in the business world. One place that fractions are used is in a department store. After completing these ten problems, do the following activities:

1. List at least five ways fractions can be used in a department store.
    1.
    2.
    3.
    4.
    5.

2. Can you think of other ways, in addition to the ones given in these problems, how employees of a department store use fractions? (List any ways you can think of.)

3. Do you see why it is important to learn how to work fractions? (Explain your answer.) .

4. Can you name other workers who must use fractions in their jobs?

5. What kind of person do you like to have wait on you in a store when you buy clothes? Why?

6. Would you like to be a salesman? (Why or why not)

1. Mr. Jones wanted to buy a
   hat. He tried on a size
   7-1/4, but it was too small.
   He tried a size 7-3/4, but
   it was too big. The follow-
   ing sizes were available in
   the style hat that he wanted.
   Which of these size hats
   would you suggest that he
   try? (Tell why.)
   Sizes:
   1-7/8, 8-1/2, 7-1/2,
   7-5/8, 7-3/8, 8-1/4

2. Mary began working as a clerk in a department store. One day
there was a sale. The spring dresses were 1/3 off the regular price.
The spring coats were 1/4 off the regular price. Ladies suits were
half price. Mrs. Simmon brought the following items to the counter:
   1. a spring dress, regular price $25.00
   2. a spring coat, regular price $50.00
   3. a suit, regular price $40.00
Pretend that you are Mary. In the space below show how you would
figure the price of each article. How much would the dress cost?
How much would the coat cost? How much would the suit cost? What
would the total bill be?

3. Joan wanted to buy a pair of black boots. She wore a size 7-1/2AA. The only pair of black boots in the store were size 8-1/2AA. Would these boots fit Joan? (If not, what is the difference in the sizes?) Should Joan buy these boots? (Why or why not?)

4. If a sweater is on sale for 1/4 off the regular price, what price should the clerk put on it if it regularly sells for $35.00 (round off to the nearest cent). Show your work.

5. Blouses were on sale for $4.00 each. At regular price they are $6.00 each. A woman asked the clerk how much the blouses were reduced. Should the clerk reply 1/2, 1/4, or 1/3? How do you know? Show your work.

6. Mona wanted some fabric to make a dress. In the fabric depart-
ment of the store she found some orange double knit material.
The material cost $6.00 a yard. Since it was sixty inches
wide, Mona only needed 1-1/2 yards to make her dress. How
much would the material cost Mona? Show your work.

7. Marge works in a fabric
department of a large store.
Mrs. Smith purchases 1-3/4
yards of corduroy material
at $1.35 a yard, 2/3 yard
of crepe at $3.00 a yard,
and 6-3/8 yards of double
knit material at $7.00 a
yard. How much did her
bill come to? Show your
work.

8. Julie told the clerk that she wanted 2/3 yards of felt. The
clerk measures the material on a yardstick attached to the cutting
table. How many inches of material should she cut for Julie?
How many feet of material will this be?

9. During a pre-Easter sale the store sold 3/4 of the blouses on
sale. If there were sixty blouses on sale, how many did the
store sell? (Show your work.)

10. Mark is the owner of a department store. Recently, he was reading over the employees' monthly time sheets. John Brown's time sheet caused Mark concern. Using the chart below, answer the following questions.

1. How many days of work did John miss the first week?
2. How many days of work did John miss the second week of the month?
3. How many days of work did John miss the third week of the month?
4. How many days of work did John miss the fourth week of the month?
5. How many days each week was John supposed to work?
6. What fraction of the first week was John absent?
7. What fraction of the second week was John not at work?
8. What fraction of the third week was John not at work?
9. What fraction of the fourth week was John not at work?
10. What fraction of the total number of work days for this month had John not reported for work? (Show your work.)

MONTHLY TIME SHEET

Date	M IN OUT	T IN OUT	W IN OUT	Th IN OUT	F IN OUT	Sa IN OUT	Hours Worked	Days Worked	Days Absent	Total Work Days
April 3-8	8.00 12:00 1:00 6:00	3 00 12:00 2:00 4:00					M - 9 T - 6 Total 15	2	4	6
April 10-15				8 2 1:00 4:00	9 00 12:00 2:0 6:00	8 00 11:00 7:00 4:00		3	3	6
April 17-22	8 00 1:00 5:00	8 00 12:00 2:00 4:00	9:00 1:00 2:00 3:00	10:00 12:00	11 2:00 3:00			4	2	6
April 25-29			7:00 2:00 4:00	6:00 5:00	11:00	11 2:00		3	3	6
Total								12	12	24

Thought Question: If you were Mark, what would you do about John?

ANSWER SHEET

1. 7-1/2 because 7-1/2 is larger than 7-1/4, but smaller than 7-3/4.
                7-1/2 - 7-1/4 = 1/4
                7-3/4 - 7-1/2 = 1/4

   7-5/8 because it is larger than 7-1/4 and smaller than 7-3/4
                7-5/8 - 7-1/4 = 7-5/8 - 7-2/8 = 3/8
                7-3/4 - 7-3/8 = 7-6/8 - 7-5/8 = 1/8

   7-3/8 because it is larger than 7-1/4 and smaller than 7-3/4
                7-3/8 - 7-1/4 = 7-3/8 - 7-2/8 = 1/8
                7-3/4 - 7-3/8 = 7-6/8 - 7-3/8 = 3/8

2. 1/3 of $25.00 equals the amount off of the regular price of the
   dress
   1/3 of $25.00 = $8.33, so the price of the dress would equal
   $25.00 - $8.33 or $16.67

   1/4 of $50.00 equals the amount off the regular price of the coat
   1/4 of $50.00 = $12.50, so the price of the coat on sale would be
   $50.00 - $12.50 or $37.50

   1/2 of $40.00 equals the amount off the regular price of the suit
   1/2 of $40.00 = $20.00, so the sale price of the suit would be
   $40.00 - $20.00 or $20.00

   The total bill sould be $16.67
                            37.50
                            20.00
                           $74.17

3. 8-1/2 - 7-1/2 = 1

   No, the boots would not fit Joan. They are one size too big. No,
   Joan should not buy the boots because they would not fit her. If
   she wore them she might get blisters on her feet.

4. 1/4 of $35.00 = $8.75. Sale price of the sweater would be $35.00 -
   $8.75 or $26.25

5. $6.00
   - 4.00
   $2.00 $2.00 is what part of $6.00? 2/6 = 1/3

6. $6.00 X 1-1/2 = $6.00 + $3.00 = $9.00
   $9.00 is the price of the material

7. $1.35 X 1-3/4 + $3.00 X 2/3 + 6-3/8 X $7.00 = total of bill =
        $2.36   + $2.00   + $44.63   = $48.99

8. 2/3 of 36 inches (number of inches in a yard) = 24 inches

    24 inches divided by 12 inches (number of inches in a foot) equals
    the number of feet in 24 inches, or <u>2 feet</u>.

9. 3/4 of 60 = number of blouses sold during the sale

    3/4 of 60 = 45

10.
    1. missed 4 days the first week
    2. missed 3 days the second week
    3. missed 2 days the third week
    4. missed 3 days the fourth week
    5. should have worked six days each week
    6. John was absent 4/6 or 2/3 of the first week
    7. John was absent 3/6 or 1/2 of the second week
    8. John was absent 2/6 or 1/3 of the third week
    9. John was absent 3/6 or 1/2 of the fourth week
    10. John was absent 4+3+2+3 or 12 days out of 24 days or 12/24
        of the month so he was absent 1/2 of the time.

Thought question: Student's own opinion, any answer is correct.
    Points to be noted should include: the lack of responsibility on
    John's part when not showing up for work.
    Before firing John, employer should check and see if there is
    a valid reason for John being absent so much, such as illnesses.
    Employer should check with the immediate supervisor to see if
    he has called John on it and if not why he hasn't called John
    on his high record of absenteeism. Employer should make sure that
    John has been warned that being absent 1/2 of the time is not
    acceptable to the company and should personally talk to John
    if the supervisor has failed to do so.

These brick-layers use multiplication to work problems about area.

1. This house will be 80 ft. by 50 ft. What is the area of the house?

2. The basement wall needs to be 10 ft. high. Each brick is 8". How many bricks deep should the men lay the basement wall?

3. You need 2 gallons of water for each 5-pound bag of cement. How much water would you need for 20 pounds of cement?

4. One wall is 65 bricks long and 15 bricks high. How many bricks would the men need to order for that wall? .

1. This "lube" man earns $2.10 an hour. Each day he works 8 hours. How much does he earn each day? In 5 days? In 20 days?

2. One day he came to work at 7:30. He took one-half hour off for lunch and left work at 5:30. How many hours did he work that day?

3. This worker changes oil in cars. Each car takes 5 quarts of oil. He must do 13 cars this day. How many quarts of oil does he need to order?

BRIEF PROJECT SUMMARY

"Do You Really Need To Study Math?"

Written and Recorded
by
Ted Stilwill and Francis Children

Using a set of 31 slides with a tape narration that depicts various people at work in local businesses, we have attempted to show how different mathematical skills are necessary or useful in a wide variety of occupations. Addition, subtraction, multiplication and division are featured, but other skills including counting, decimals, fractions, percentages, ratios and geometry are also mentioned.

While the quality of this presentation is questionable, it does demonstrate how a teacher might relate classroom math to the "outside world." Perhaps an audio-visual approach might provide an occasional interest boost. This same type of procedure might be just as easily applied to the other subject areas.

Most simply, we feel that the teacher can apply his or her own knowledge of the world of work to add meaning to the classroom.

Note: The slide-tape presentation is available through the Career Education Department of the Pottawattamie County School System.