## Average MAP Growth Test Durations

## 1. Introduction

Thousands of U.S. school districts and many international schools use MAP® Growth ${ }^{\text {™ }}$ to monitor the academic growth of their students and to inform instruction. The MAP Growth assessment is untimed, meaning that limits are not placed on how much time a student has to respond to the items. However, to help schools understand the amount of time MAP Growth assessments typically take, this document presents tables depicting the average MAP Growth testing durations by content area and grade based on aggregated test durations from student tests during the 2016-17 and 2017-18 school years. The tables are intended to provide educators with general ranges that indicate how long students normally take to complete a MAP Growth assessment, as well as the normal differences in test duration across terms.

This document will be updated periodically to ensure that the durations reported within are current. Please refer to NWEA's Research Publications for more information about administering the MAP Growth assessment and using MAP Growth data.

## 2. Average MAP Growth Test Durations

Table 2.1 - Table 2.18 are based on the measured test durations for all students who took MAP Growth Mathematics, Reading, Language Usage, and Science assessments in 2016-17, and 2017-18 school years. These tables show the mean test durations, median durations (50th percentile), extremely long durations (90th percentile), and extremely short durations (10th percentile) by testing season, content area, and grade.

- $50 \%$ of students require less time and $50 \%$ require more time than the 50th percentile duration.
- $90 \%$ of students complete the assessment in less time than the 90th percentile duration.
- $10 \%$ of students complete the assessment in less time than the 10th percentile duration.

The tables also provide the average test durations are also provided for Spring 2017 highperforming students (i.e., students in the 90th achievement percentile and above) in Mathematics and Reading, as well as the differences in durations between testing seasons. All test durations in the tables are in minutes. For Mathematics and Reading, Grade 2 includes both MAP Growth K-2 and MAP Growth $2-5$ assessments. Grade 1 students are primarily MAP Growth K-2, although some students may have taken MAP Growth $2-5$. Grade 3 students are primarily MAP Growth $2-5$.

These values are not strict requirements and should be used as rough comparisons to plan for MAP Growth testing. For example, even though 90\% of all students complete their MAP Growth tests in less time than the 90th percentile duration, it is possible that a given classroom might have more than $10 \%$ of students requiring more time, depending on the circumstances. On the other hand, if a large proportion of students in a class (e.g., more than $30 \%$ ) required more time than the amount indicated by the 90th percentile threshold, this could be an indicator that inefficient testing practices are being used.

Table 2.1. Test Durations in minutes-Fall 2017, Mathematics

|  |  | Mean Test <br> Grade | Standard | Duration Percentiles |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \#Students |  | Deviation | 10th | 50th | 90th |
| K | 541,519 | 25.6 | 11.3 | 14 | 23 | 40 |
| 1 | 759,124 | 29.2 | 12.3 | 16 | 27 | 45 |
| 2 | 901,145 | 39.4 | 17.6 | 21 | 36 | 61 |
| 3 | 977,910 | 47.6 | 20.9 | 26 | 44 | 73 |
| 4 | 963,853 | 53.2 | 23.6 | 30 | 49 | 82 |
| 5 | 981,496 | 57.5 | 24.9 | 32 | 53 | 88 |
| 6 | 957,437 | 62.1 | 25.9 | 35 | 58 | 94 |
| 7 | 907,152 | 64.2 | 27.0 | 36 | 60 | 97 |
| 8 | 873,083 | 65.4 | 28.0 | 36 | 61 | 100 |
| 9 | 431,772 | 57.6 | 24.9 | 31 | 54 | 88 |
| 10 | 312,976 | 53.5 | 24.0 | 28 | 50 | 82 |

Table 2.2. Test Durations in minutes —Winter 2018, Mathematics

|  |  | Grade | \#Students | Mean Test <br> Duration | Standard <br> Deviation | Duration Percentiles |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | ---: | :---: | :---: |
| K | 586,883 |  | 9.1 | 13 | 20 | 33 |  |  |
| 1 | 702,516 | 29.0 | 12.5 | 17 | 37 | 44 |  |  |
| 2 | 822.979 | 40.7 | 19.9 | 21 | 37 | 65 |  |  |
| 3 | 874,291 | 52.3 | 24.5 | 28 | 47 | 81 |  |  |
| 4 | 865,622 | 57.2 | 26.6 | 31 | 52 | 89 |  |  |
| 5 | 881,337 | 62.8 | 28.5 | 34 | 57 | 97 |  |  |
| 6 | 810,541 | 67.6 | 30.2 | 37 | 62 | 104 |  |  |
| 7 | 745,102 | 70.0 | 31.0 | 38 | 64 | 108 |  |  |
| 8 | 718,583 | 70.9 | 33.3 | 38 | 65 | 110 |  |  |
| 9 | 303,025 | 58.2 | 25.9 | 31 | 54 | 89 |  |  |
| 10 | 219,322 | 54.3 | 24.7 | 28 | 50 | 84 |  |  |

Table 2.3. Test Durations in minutes —Spring 2017, Mathematics

|  |  | Mean Test <br> Grade | Standard <br> \#Students | Duration Percentiles |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | ---: |
|  | Duration |  |  | 50th | 90th |  |
| K | 585,260 |  | 15.4 | 20 | 33 | 55 |
| 2 | 696,211 | 43.1 | 17.3 | 26 | 40 | 64 |
| 3 | 858,824 | 48.4 | 22.0 | 27 | 44 | 75 |
| 4 | 858,376 | 57.7 | 27.9 | 31 | 52 | 91 |
| 5 | 847,698 | 62.3 | 29.6 | 34 | 56 | 98 |
| 6 | 837,572 | 66.9 | 31.5 | 36 | 60 | 105 |
| 7 | 808,973 | 70.7 | 33.6 | 37 | 64 | 111 |
| 8 | 773,447 | 70.7 | 34.3 | 37 | 64 | 111 |
| 9 | 710,873 | 69.9 | 34.3 | 36 | 63 | 110 |
| 10 | 325,117 | 56.7 | 25.5 | 30 | 53 | 87 |

Table 2.4. Test Durations in minutes —Spring 2017, Mathematics High-Performing Students (90th Percentile Achievement and Above)

|  |  | Mean Test | Standard <br> Grade | \#Students | Duration Percentiles |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | ---: | :---: |
| Duration | Deviation |  |  | 90th |  |  |  |
| K | 71,539 | 49.0 | 19.0 | 30 | 45 | 72 |  |
| 1 | 103,697 | 49.2 | 19.8 | 30 | 45 | 73 |  |
| 2 | 101,518 | 51.5 | 24.5 | 29 | 46 | 80 |  |
| 3 | 65,081 | 72.6 | 36.2 | 39 | 64 | 116 |  |
| 4 | 70,793 | 80.8 | 37.5 | 45 | 72 | 127 |  |
| 5 | 88,211 | 86.1 | 37.9 | 49 | 78 | 133 |  |
| 6 | 63,239 | 93.0 | 42.1 | 53 | 83 | 143 |  |
| 7 | 81,838 | 90.0 | 41.1 | 52 | 80 | 137 |  |
| 8 | 90,792 | 86.9 | 38.8 | 51 | 78 | 132 |  |
| 9 | 27,694 | 73.2 | 28.0 | 45 | 68 | 106 |  |
| 10 | 24,776 | 67.5 | 25.3 | 42 | 63 | 98 |  |

Table 2.5. Average Differences* in Test Durations in minutes —Mathematics

| Grade | Average Differences |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Spring 17 <br> - Fall 16 | Spring 17 - <br> Winter 17 | Winter 18 - <br> Fall 17 | Fall 17 - <br> Fall 16 | Winter 18- <br> Winter 17 | Spring 17 - <br> Spring 16 | Fall 16 - <br> Spring 16 |
|  | 4.9 | 7.0 | -3.7 | -1.5 | 0.6 | 9.4 | 0.0 |
| 1 | 8.6 | 5.1 | -0.2 | 5.9 | 3.5 | 8.1 | -0.4 |
| 2 | 8.1 | 5.2 | 1.4 | 8.2 | 9.9 | 11.5 | -0.1 |
| 3 | 11.3 | 7.0 | 4.5 | 7.8 | 7.2 | 7.7 | -3.4 |
| 4 | 10.6 | 7.0 | 3.8 | 7.0 | 8.5 | 8.0 | -3.4 |
| 5 | 10.9 | 6.1 | 5.2 | 7.9 | 8.8 | 8.0 | -3.4 |
| 6 | 11.3 | 6.8 | 5.5 | 7.5 | 7.5 | 7.6 | -4.0 |
| 7 | 8.8 | 4.2 | 5.2 | 6.5 | 6.8 | 4.1 | -3.2 |
| 8 | 6.8 | 2.4 | 4.8 | 0.4 | -3.0 | -3.1 | -5.3 |
| 9 | 1.4 | 0.4 | 0.8 | -0.7 | -0.8 | 0.5 | -2.4 |
| 10 | 1.6 | 0.5 | 1.1 | 0.6 | 0.6 | -0.4 | -1.2 |

${ }^{*}$ Note: The number of items on the MAP Growth K-2 assessment was reduced beginning in Fall of 2017, so changes in duration across seasons for students taking this assessment may change as a result. This document will be updated to reflect those changes once they have stabilized.

Table 2.6. Test Durations in minutes -Fall 2017, Reading

|  |  | Grade | \#Students | Mean Test <br> Duration | Standard <br> Deviation | Duration Percentiles |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| K | 511,385 |  | 12.4 |  |  | 44 |  |  |
| 1 | 717,229 | 27.5 | 10.9 | 16 | 26 | 41 |  |  |
| 2 | 870,441 | 37.8 | 21.6 | 17 | 33 | 64 |  |  |
| 3 | 970,873 | 49.8 | 26.1 | 22 | 45 | 83 |  |  |
| 4 | 957,659 | 56.6 | 27.1 | 27 | 52 | 90 |  |  |
| 5 | 972,713 | 59.1 | 26.2 | 31 | 55 | 92 |  |  |
| 6 | 949,376 | 64.8 | 28.9 | 33 | 61 | 101 |  |  |
| 7 | 905,701 | 63.3 | 27.9 | 32 | 59 | 99 |  |  |
| 8 | 879,461 | 63.2 | 28.3 | 32 | 59 | 98 |  |  |
| 9 | 439,572 | 57.2 | 25.9 | 28 | 54 | 89 |  |  |
| 10 | 332,481 | 52.4 | 24.7 | 25 | 49 | 83 |  |  |

Table 2.7. Test Durations in minutes —Winter 2018, Reading

|  |  |  | Mean Test | Standard <br> Grade | \#Students | Duration Percentiles |  |
| :---: | :---: | :---: | :---: | :---: | :---: | ---: | :---: |
| Duration | Deviation |  |  | 90th |  |  |  |
| K | 567,792 | 22.3 | 9.1 | 13 | 21 | 33 |  |
| 2 | 674,257 | 28.3 | 11.1 | 17 | 27 | 42 |  |
| 3 | 815,123 | 42.5 | 24.4 | 20 | 36 | 74 |  |
| 4 | 887,971 | 56.4 | 28.5 | 31 | 57 | 98 |  |
| 5 | 874,567 | 62.0 | 29.4 | 31 | 57 | 98 |  |
| 6 | 884,926 | 65.4 | 29.7 | 34 | 61 | 102 |  |
| 7 | 814,759 | 71.0 | 33.1 | 35 | 66 | 112 |  |
| 8 | 746,175 | 70.2 | 33.4 | 35 | 65 | 111 |  |
| 9 | 732,766 | 71.0 | 34.7 | 35 | 65 | 113 |  |
| 10 | 308,838 | 58.4 | 27.7 | 28 | 55 | 93 |  |
|  | 235,375 | 54.1 | 26.4 | 25 | 50 | 86 |  |

Table 2.8. Test Durations in minutes —Spring 2017, Reading

|  |  | Grade | \#Students | Mean Test <br> Duration | Standard <br> Deviation | Duration Percentiles |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | ---: | :---: | :---: |
| K | 550,324 |  | 13.4 | 19 | 31 | 49 |  |  |
| 1 | 659,709 | 39.3 | 14.5 | 24 | 37 | 57 |  |  |
| 2 | 838,779 | 48.1 | 24.7 | 24 | 43 | 79 |  |  |
| 3 | 862,555 | 59.3 | 29.9 | 28 | 54 | 96 |  |  |
| 4 | 848,718 | 62.1 | 29.8 | 31 | 57 | 98 |  |  |
| 5 | 838,724 | 63.9 | 30.0 | 33 | 59 | 100 |  |  |
| 6 | 800,917 | 68.5 | 33.2 | 34 | 63 | 109 |  |  |
| 7 | 772,682 | 66.5 | 33.4 | 32 | 61 | 106 |  |  |
| 8 | 721,295 | 66.0 | 33.7 | 32 | 60 | 106 |  |  |
| 9 | 347,137 | 53.3 | 26.0 | 25 | 50 | 85 |  |  |
| 10 | 258,727 | 49.9 | 25.3 | 22 | 46 | 81 |  |  |

Table 2.9. Test Durations in minutes —Spring 2017, Reading High-Performing Students (90th Percentile Achievement and Above)

|  |  | Mean Test | Standard | Duration Percentiles |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | ---: |
| Grade | \#Students |  |  | 10th | 50th | 90th |
| K | 66,277 | 46.0 | 16.5 | 30 | 43 | 65 |
| 1 | 87,987 | 44.7 | 15.3 | 30 | 42 | 62 |
| 2 | 96,892 | 58.0 | 28.5 | 30 | 52 | 94 |
| 3 | 83,742 | 68.1 | 30.8 | 38 | 62 | 105 |
| 4 | 86,527 | 66.1 | 29.1 | 38 | 60 | 100 |
| 5 | 85,365 | 64.1 | 28.6 | 37 | 58 | 97 |
| 6 | 71,459 | 78.2 | 34.3 | 44 | 71 | 119 |
| 7 | 77,118 | 75.6 | 34.9 | 43 | 69 | 114 |
| 8 | 85,527 | 72.5 | 32.8 | 41 | 66 | 110 |
| 9 | 27,615 | 60.8 | 22.9 | 37 | 57 | 88 |
| 10 | 22,367 | 57.3 | 22.2 | 34 | 54 | 84 |

Table 2.10. Average Differences* in Test Durations in minutes —Reading

| Grade | Average Differences |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Spring 17 <br> - Fall 16 | Spring 17 - <br> Winter 17 | Winter 18 - <br> Fall 17 | Fall 17 - <br> Fall 16 | Winter 18- <br> Winter 17 | Spring 17 - <br> Spring 16 | Fall 16 - <br> Spring 16 |
|  | -2.6 | 4.2 | -5.9 | -8.8 | -0.8 | 7.3 | 0.4 |
| 1 | 6.0 | 3.9 | 0.9 | 5.7 | 8.6 | 11.3 | 1.6 |
| 2 | 9.1 | 4.8 | 4.9 | 12.1 | 14.5 | 13.9 | 1.8 |
| 3 | 11.4 | 6.9 | 6.5 | 10.2 | 10.6 | 6.8 | -1.6 |
| 4 | 7.9 | 4.8 | 5.1 | 6.6 | 9.4 | 6.7 | -1.1 |
| 5 | 7.3 | 3.8 | 5.9 | 10.6 | 13.4 | 11.3 | 3.0 |
| 6 | 7.2 | 3.9 | 5.8 | 4.9 | 7.8 | 2.9 | -4.8 |
| 7 | 6.7 | 2.9 | 6.0 | 6.3 | 9.7 | 4.2 | -2.8 |
| 8 | 6.5 | 1.9 | 6.6 | 3.3 | -0.3 | -4.2 | -4.7 |
| 9 | 0.1 | -0.3 | 1.2 | 0.6 | 0.7 | -1.4 | -2.5 |
| 10 | 0.7 | 0.0 | 1.3 | 3.8 | 2.3 | -2.1 | -1.8 |

${ }{ }^{\text {N }}$ Note: The number of items on the MAP Growth K-2 assessment was reduced beginning in Fall of 2017, so changes in duration across seasons for students taking this assessment may change as a result. This document will be updated to reflect those changes once they have stabilized.

Table 2.11. Test Durations in minutes —Fall 2017, Language Usage

|  |  | Grade | \#Students | Mean Test <br> Duration | Standard <br> Deviation | Duration Percentiles |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 10th |  | 90th |  |  |  |  |  |
| 2 | 147,395 | 36.0 | 19.3 | 16 | 32 | 60 |  |  |
| 3 | 291,978 | 41.9 | 20.3 | 21 | 38 | 67 |  |  |
| 4 | 313,298 | 46.9 | 21.7 | 25 | 43 | 73 |  |  |
| 5 | 311,388 | 48.7 | 21.0 | 27 | 45 | 74 |  |  |
| 6 | 318,153 | 48.6 | 19.8 | 27 | 46 | 73 |  |  |
| 7 | 307,160 | 47.4 | 19.2 | 27 | 44 | 71 |  |  |
| 8 | 298,796 | 46.6 | 18.9 | 27 | 44 | 69 |  |  |
| 9 | 163,581 | 44.0 | 18.4 | 25 | 41 | 66 |  |  |
| 10 | 131,483 | 41.0 | 17.7 | 23 | 38 | 62 |  |  |

Table 2.12. Test Durations in minutes -Winter 2018, Language Usage

|  |  | Grade | \#Students | Mean Test <br> Duration | Standard <br> Deviation | Duration Percentiles |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 115,725 |  | 20.8 |  |  | 66 |  |  |
| 3 | 223,532 | 46.0 | 22.1 | 23 | 42 | 73 |  |  |
| 4 | 247,050 | 50.5 | 23.8 | 27 | 46 | 79 |  |  |
| 5 | 240,361 | 53.0 | 23.4 | 29 | 49 | 81 |  |  |
| 6 | 240,760 | 52.1 | 22.8 | 29 | 48 | 80 |  |  |
| 7 | 223,985 | 51.3 | 22.6 | 28 | 47 | 79 |  |  |
| 8 | 214,481 | 51.2 | 22.8 | 28 | 47 | 79 |  |  |
| 9 | 107,201 | 46.0 | 21.1 | 25 | 42 | 71 |  |  |
| 10 | 82,203 | 43.1 | 20.2 | 23 | 39 | 67 |  |  |

Table 2.13. Test Durations in minutes —Spring 2017, Language Usage

|  |  | Mean Test | Standard <br> Grade | \#Students | Duration Percentiles |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Duration |  |  | 50th | 90th |  |  |
| 2 | 148,067 | 44.5 | 21.8 | 22 | 40 | 71 |  |
| 3 | 236,772 | 49.2 | 23.8 | 25 | 45 | 78 |  |
| 4 | 248,055 | 51.8 | 24.1 | 28 | 47 | 81 |  |
| 5 | 244,933 | 53.4 | 24.4 | 29 | 49 | 82 |  |
| 6 | 249,759 | 51.1 | 22.9 | 28 | 47 | 78 |  |
| 7 | 237,719 | 48.8 | 21.6 | 27 | 45 | 75 |  |
| 8 | 219,109 | 47.6 | 21.0 | 26 | 44 | 73 |  |
| 9 | 123,444 | 41.7 | 18.8 | 22 | 38 | 64 |  |
| 10 | 101,456 | 39.5 | 18.0 | 21 | 37 | 61 |  |

Table 2.14. Average Differences* in Test Durations in minutes —Language Usage

| Grade | Average Differences |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Spring 17 <br> - Fall 16 | Spring 17 - <br> Winter 17 | Winter 18 - <br> Fall 17 | Fall 17 - <br> Fall 16 | Winter 18- <br> Winter 17 | Spring 17 - <br> Spring 16 | Fall 16 - <br> Spring 16 |
| 2 | 9.5 | 4.8 | 5.5 | 8.6 | 8.4 | 7.9 | -0.9 |
| 3 | 8.4 | 5.5 | 4.5 | 6.8 | 7.6 | 4.8 | -1.9 |
| 4 | 6.7 | 4.4 | 3.9 | 5.1 | 7.3 | 4.5 | -2.1 |
| 5 | 6.4 | 3.5 | 4.3 | 2.8 | 3.5 | 1.3 | -3.6 |
| 6 | 4.8 | 2.7 | 3.5 | 2.0 | 3.8 | 0.8 | -3.1 |
| 7 | 3.5 | 1.6 | 3.6 | 2.0 | 4.9 | 1.7 | -1.7 |
| 8 | 3.4 | 1.0 | 3.9 | 1.0 | 0.1 | -1.8 | -2.5 |
| 9 | -0.1 | -0.2 | 0.8 | -1.5 | 0.1 | -0.5 | -1.3 |
| 10 | 0.3 | -0.3 | 1.3 | -0.8 | 1.2 | -0.7 | -0.7 |

Table 2.15. Test Durations in minutes -Fall 2017, Science

|  |  | Gean Test | Standard <br> Grade | \#Students | Duration Percentiles |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Duration |  |  | 50th | 90th |  |
| 3 | 108,245 | 35.6 | 16.7 | 19 | 32 | 56 |
| 4 | 132,682 | 39.9 | 18.0 | 21 | 36 | 62 |
| 5 | 180,934 | 42.1 | 18.2 | 23 | 39 | 64 |
| 6 | 170,545 | 41.2 | 17.9 | 23 | 38 | 63 |
| 7 | 178,649 | 39.9 | 17.3 | 22 | 38 | 61 |
| 8 | 192,991 | 39.8 | 17.3 | 22 | 37 | 61 |
| 9 | 48,046 | 36.8 | 17.3 | 20 | 33 | 56 |
| 10 | 39,291 | 34.7 | 16.7 | 19 | 32 | 53 |

Table 2.16. Test Durations in minutes -Winter 2018, Science

|  |  | Mean Test | Standard <br> Grade | \#Students | Duration Percentiles |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Duration |  |  | 50th | 90th |  |
| 3 | 87,573 | 40.2 | 18.7 | 21 | 37 | 63 |
| 4 | 119,930 | 44.2 | 20.6 | 24 | 40 | 69 |
| 5 | 163,121 | 47.0 | 21.3 | 26 | 43 | 73 |
| 6 | 143,737 | 45.6 | 21.5 | 24 | 41 | 70 |
| 7 | 147,451 | 44.4 | 20.8 | 24 | 40 | 70 |
| 8 | 157,309 | 45.2 | 22.0 | 24 | 41 | 71 |
| 9 | 31,716 | 40.4 | 21.6 | 20 | 36 | 65 |
| 10 | 25,220 | 38.0 | 20.0 | 19 | 34 | 60 |

Table 2.17. Test Durations in minutes -Spring 2017, Science

| Grade | \#Students | Mean Test Duration | Standard Deviation | Duration Percentiles |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 10th | 50th | 90th |
| 3 | 85,056 | 40.4 | 20.4 | 21 | 36 | 64 |
| 4 | 109,892 | 41.9 | 20.4 | 22 | 38 | 66 |
| 5 | 144,905 | 43.8 | 21.4 | 23 | 39 | 69 |
| 6 | 144,188 | 41.0 | 20.6 | 22 | 37 | 65 |
| 7 | 152,181 | 39.5 | 19.4 | 21 | 35 | 62 |
| 8 | 148,785 | 38.9 | 19.4 | 21 | 35 | 62 |
| 9 | 40,977 | 32.2 | 13.9 | 18 | 30 | 49 |
| 10 | 34,960 | 31.1 | 14.3 | 17 | 28 | 48 |

Table 2.18. Average Differences in Test Durations in minutes —Science

| Grade | Average Differences |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Spring 17 <br> - Fall 16 | Spring 17 - <br> Winter 17 | Winter 18 - <br> Fall 17 | Fall 17 - <br> Fall 16 | Winter 18- <br> Winter 17 | Spring 17 - <br> Spring 16 | Fall 16 - <br> Spring 16 |  |
| 3 | 7.3 | 4.6 | 5.1 | 7.4 | 8.9 | 5.3 | -0.6 |  |
| 4 | 5.5 | 3.5 | 4.0 | 6.4 | 9.1 | 5.2 | -0.6 |  |
| 5 | 5.3 | 2.5 | 4.6 | 4.4 | 5.8 | 2.2 | -2.2 |  |
| 6 | 3.8 | 2.0 | 3.8 | 3.8 | 5.7 | 2.4 | -1.2 |  |
| 7 | 3.2 | 1.4 | 1.6 | 5.2 | 7.6 | 3.2 | 0.1 |  |
| 8 | 3.3 | 0.9 | 4.4 | 1.6 | 2.2 | -0.7 | -0.5 |  |
| 9 | -0.3 | -0.3 | 1.5 | -0.4 | 1.9 | 0.4 | -0.1 |  |
| 10 | 0.5 | 0.0 | 1.5 | 1.1 | 2.2 | -0.7 | -0.3 |  |

