IXL LevelUp™ Diagnostic for Math Norming Technical Manual

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Introduction

A score on any assessment provides information about students' performance. By itself, however, a score is meaningless without additional context and provides no actionable recourse. Norms are contextualizing resources that provide actionable recourse to assessment scores. Norms describe how students perform relative to a population of representative students at specific points during the academic year. They describe how far below or above the average student enrolled in the same grade that students are performing, typically using summary statistics like means, standard deviations, and percentile ranks. For example, a student may achieve the highest test score in her class on a given assessment but still fall below the national average of students at her grade level who have completed the same assessment (i.e., a percentile rank < 50). Educators can use this information to compare their students' scores to those of other students across the United States who completed the same assessment. Such comparisons can help educators target resources to maximize student learning and achievement.

It is important to consider the time of year when examining student performance and growth. The characteristics of the students in a sample should be sufficiently similar such that comparisons are meaningful. To this end, norms are set relative to the beginning (BOY; August 1 – November 30), middle (MOY; December 1 – February 28), and end (EOY; March 1 – June 1) of the school year.

The IXL LevelUp™ Diagnostic for Math provides teachers and students with an easily interpretable score that ranges from 0 to 1200 and is strongly tied to expected student performance on grade-level content. For example, a score of 400 indicates that a student is ready for content typically taught at the beginning of 4th grade, while a score of 450 means a student is ready for content targeting 4th-grade students during the middle of the year. These scores provide a quick and easy way for teachers to determine the appropriate instructional level for a student.

Despite these affordances, not all necessary information is present to understand how students of any ability will progress throughout the year. It may not be reasonable to expect students two grade levels behind their peers to reach the mean level of ability by the end of the year, but it would be helpful to know how much similar students typically grow by the end of the year. Furthermore, educators need support in tailoring instruction for and to know what to expect from students who perform two grade levels above their peers by the end of the year.

For example, consider a 5th grader who started the school year with a score of 260 and ended with a score of 460. Although this student is still further behind than most of his peers, his ability has increased by 200 points. Is this what is expected by students who scored similarly, or is it considerably lower or higher? Consider another hypothetical example involving a 7th grader who outperformed most of her peers at the beginning of the year with a score of 860 and ended the school year still outperforming most of her peers with a score of 870. Although she performed well and is still ahead of her class, the question remains about whether that amount of growth is

expected compared to other 7th graders who started with a similar score. Perhaps most other students with similar scores grew considerably more.

These questions likely arise for many teachers, parents, administrators, etc. One way to answer these is by using growth norms. Growth norms describe how much the students grow over time relative to their initial, baseline score. For the IXL LevelUp Diagnostic for Math, growth norms allow teachers to determine if their students are improving as expected and further tailor their instruction as needed.

Sampling

The target population for the IXL LevelUp Diagnostic for Math includes all students enrolled in kindergarten through grade 8 in public and private schools across the United States during the 2024-25 academic year. The sample used to develop achievement norms comprised 487,156 students from 2,068 schools in 49 states and Guam who completed 951,206 tests, averaging 1.95 tests per student. For the growth norms, we included only students who completed at least one test during at least two windows (i.e., BOY, MOY, and EOY), resulting in a total of 263,962 students from 1,130 schools in 47 states and Guam who completed 681,438 tests, averaging 2.58 tests per student. For the predicted growth norms, we included only students who completed the assessment at least twice, regardless of window, resulting in a total of 271,630 students from 1,180 schools in 47 states and Guam who completed 735,680 tests, averaging 2.71 tests per student. School-demographic data come from the National Center for Education Statistics (NCES; https://nces.ed.gov/ccd). Table 1 below shows the degree to which the IXL sample is sufficiently representative of its target population.

Table 1. Demographic representation for the norming sample

Variable	National %	IXL %
Gender		
Female	48.7	48.8
Male	51.3	51.2
Race/ethnicity		
American Indian or Alaska Native	1.0	1.2
Asian	5.9	4.9
Black or African American	15.6	15.8
Hispanic or Latino	31.3	27.6
Native Hawaiian or Pacific Islander	0.4	0.4
White	46.2	50.4
Free or reduced-price lunch	53.7	52.1

Achievement Norms

This section reports the achievement norms for the IXL LevelUp Diagnostic for Math. Achievement norms provide context throughout the academic year about how students perform relative to a representative sample of their peers. Table 2 reports the number of students who completed the assessment, along with the mean and standard deviation of the grade scores by grade and time of year.

Table 2. Mean score by grade and window

	BOY			MOY			EOY		
Grade	***N***	**Mean**	**SD**	***N***	**Mean**	**SD**	***N***	**Mean**	**SD**
K	8,008	76.3	48.2	8,831	111.2	51.2	10,710	145.4	60.2
1	13,462	146.1	75.2	12,963	181.8	64.3	14,399	214.7	68.8
2	18,002	220.2	95.1	16,555	251.5	75.5	18,057	283.6	83.8
3	22,713	279.5	110.5	21,619	316.3	95.1	24,082	360.4	106.3
4	23,567	333.9	128.3	22,760	384.9	110.8	23,861	432.4	127.5
5	24,777	368.8	161.4	24,792	447.1	146.5	24,706	489.1	170.6
6	49,988	419.3	209.8	43,547	495.8	190.1	44,519	549.2	218.3
7	50,152	461.6	227.8	44,583	550.3	230.7	42,706	604.1	254.1
8	46,214	503.6	241.5	41,987	594.7	265.9	38,120	638.8	281.8

Although informative, a description of the distribution of student scores is not necessarily useful when considering the performance of a single student. Therefore, more detailed tables showing achievement norms in the form of achievement percentiles have been provided in Appendix A. These tables show the percentile ranks associated with each score point for beginning, middle, and end of year by grade.

Growth Norms

This section reports the growth norms for the IXL LevelUp Diagnostic for Math. Growth norms provide information that describes the growth of a representative sample of students from an initial baseline performance to a later date. Table 3 reports the mean and standard deviation of growth in grade score by grade and time of year. These numbers indicate how much stakeholders can expect the average student to grow across the academic year, regardless of their baseline grade score.

Table 3. Growth norms descriptives by grade and window

	BOY to MOY		MOY to EOY		BOY to EOY	
Grade	Mean	SD	Mean	SD	Mean	SD
K	39.2	43.3	37.3	42.8	72.5	53.7
1	38.5	50.4	35.9	44.2	72.0	57.6
2	31.6	59.8	36.2	49.3	67.2	64.1
3	41.5	66.2	48.3	59.3	87.5	72.9
4	56.5	75.0	47.6	69.5	104.0	84.0
5	82.1	94.1	51.2	89.4	130.2	108.0
6	95.6	118.4	54.9	119.1	136.8	147.5
7	102.3	138.0	55.2	149.1	148.6	172.2
8	94.7	153.2	56.6	179.4	149.1	191.3

Predicted growth norms

This section discusses the development of the predicted growth norms. The first subsection describes the multilevel models we fitted to account for the inherently nested data (Raudenbush & Bryk, 2002). The second subsection documents the k-fold cross-validation analysis we conducted to investigate and compare the prediction accuracy of various multilevel models described in the previous subsection (Larson, 1931; Mosteller & Tukey, 1968; Stone, 1974). The final subsection presents the final predicted growth norms based on the best model selected from the cross-validation analysis.

Multilevel models

We examined the prediction accuracy of four multilevel models: an unconditional model (i.e., model 1) with testing event nested within student and student nested within school; a random intercepts and fixed slopes model with testing event nested within student and student nested within school (i.e., model 2) and time-since-first-test as a level 1 predictor and student grade and baseline scores as level 2 predictors, a polynomial random intercepts and fixed slopes model with testing event nested with student and student nested within school (i.e., model 3) and time-since-first-test and time-since-first-test squared as a level 1 predictors and student grade and baseline scores as level 2 predictors, and a random intercepts and random slopes model with testing event nested within student and time-since-first-test and student nested within school at level 3 (i.e., model 4) and time-since-first-test as a level 1 predictor and student grade and baseline scores as level 2 predictors. Time-since-first-test could not be nested within students in model 4 because the model would be unidentified. Across all four models, we treated between-student and between-school differences as random effects.

Model 1: Unconditional model

We defined level 1 of model 1, the unconditional model, using the following equation:

$$Y_{tij} = \beta_{0ij} + e_{tij} \ ,$$

where Y_{tij} is the math score at time *t* by student *i* within school *j*, β_{0ij} is the intercept of student *i* within school *j*, and e_{tij} is the error at time *t* for student *i* within school *j*. Level 2 of model 1 is defined by the equation below:

$$\beta_{0ij} = \pi_{00j} + r_{0ij} \ ,$$

where β_{0ij}, again, is the intercept of student *i* within school *j*, π_{00j} is the mean of school *j*, and r_{0ij} is the deviation of student *i* within school *j* from π_{00j}. Level 3 is defined via the following equation:

$$\pi_{00j} = \gamma_{000} + u_{00j},$$

where π_{00j}, again, is the mean of school *j*, γ_{000} is the overall mean, and u_{00j} is the deviation of school *j* from γ_{000}. The following equation is the combination of all previously defined levels for model 1:

$$Y_{tij} = \gamma_{000} + u_{00j} + r_{0ij} + e_{tij}.$$

Model 2: Random intercepts and fixed slopes model

We defined level 1 of model 2, the random intercepts and fixed slopes model, using the following equation:

$$Y_{tij} = \beta_{0ij} + \beta_{100} Time_{tij} + e_{tij},$$

where β_{100} is the first fixed slope term, and $Time_{ijk}$ is the length of time *t* in months at which a test was taken from the baseline test taken by student *i* within school *j*.[1] Astute readers may question why we included the baseline score as a predictor. Without it, predictions based on a student's score would not be possible. Level 2 is defined by the equations below:

$$\beta_{0ij} = \pi_{00j} + \pi_{01j} Baseline_{ij} + \pi_{02j} Grade_{ij} + r_{0ij}$$
$$\beta_{100} = \pi_{100},$$

where π_{00j} is the mean of school *j*, π_{01j} represents the effect of students' baseline scores, π_{02j} represents the fixed effect of students' enrolled grade, and π_{100} represents the fixed rate of growth across time across all students within all schools. Level 3 is defined via the following equations:

$$\pi_{00j} = \gamma_{000} + u_{00j}$$
$$\pi_{01j} = \gamma_{010} + u_{01j}$$
$$\pi_{02j} = \gamma_{020} + u_{02j}$$
$$\pi_{100} = \gamma_{100},$$

where γ_{010} represents the mean effect of students' baseline scores on their intercepts, u_{01j} represents the deviation of school *j* from γ_{010}, γ_{020} represents the mean effect of students' enrolled grade on each student's intercept, u_{02j} represents the deviation of school *j* from γ_{020}, and γ_{100}

[1] We also examined a model similar to model 2 that included an interaction between baseline scores and time, which, although statistically significant, had a practically insignificant effect on score predictions. Thus, we retained the more parsimonious model without an interaction effect.

represents the fixed effect of time on student growth. The following equation is the combination of all previously defined levels for model 2:

$$Y_{tij} = \gamma_{000} + u_{00j} + \gamma_{010}Baseline_{ij} + u_{01j}Baseline_{ij} + \gamma_{020}Grade_{ij} + u_{02j}Grade_{ij} + \gamma_{100}Time_{ijk} + r_{0jk} + e_{ijk}.$$

Model 3: Polynomial random intercepts and fixed slopes model

We defined level 1 of model 3, the polynomial random intercepts and fixed slopes model, using the following equation:

$$Y_{tij} = \beta_{0ij} + \beta_{100}Time_{tij} + \beta_{200}Time_{tij}^{2} + e_{tij},$$

where β_{200} is the second fixed slope term, and $Time_{tij}^{2}$ is the squared length of time *j* in months at which a test was taken from the baseline test taken by student *i* within school *j*. Level 2 is defined by the equations below:

$$\beta_{0ij} = \pi_{00j} + \pi_{01j}Baseline_{ij} + \pi_{02j}Grade_{ij} + r_{0ij}$$
$$\beta_{100} = \pi_{100}$$
$$\beta_{200} = \pi_{200},$$

where π_{200} represents the fixed effect of time-squared on student growth. Level 3 is defined via the following equations:

$$\pi_{00j} = \gamma_{000} + u_{00j}$$
$$\pi_{01j} = \gamma_{010} + u_{01j}$$
$$\pi_{02j} = \gamma_{020} + u_{02j}$$
$$\pi_{100} = \gamma_{100}$$
$$\pi_{200} = \gamma_{200},$$

where γ_{200} represents the second fixed slope term. The following equation is the combination of all previously defined levels for model 3:

$$Y_{tij} = \gamma_{000} + u_{00j} + \gamma_{010}Baseline_{ij} + u_{01j}Baseline_{ij} + \gamma_{020}Grade_{ij} + u_{02j}Grade_{ij} + \gamma_{100}Time_{ijk} + \gamma_{200}Time_{ijk}^{2} + r_{0jk} + e_{ijk}.$$

Model 4: Random intercepts and random slopes model

We defined level 1 of model 4, the random intercepts and random slopes model, using the following equation:

$$Y_{tij} = \beta_{0ij} + \beta_{10j} Time_{tij} + e_{tij},$$

where β_{10j} represents the unique slope for each school *j*. Level 2 is defined by the equations below:

$$\beta_{0ij} = \pi_{00j} + \pi_{01j} Baseline_{ij} + \pi_{02j} Grade_{ij} + r_{0ij}$$
$$\beta_{10j} = \pi_{10j},$$

where π_{10j} represents the slope for school *j*. Level 3 is defined via the following equations:

$$\pi_{00j} = \gamma_{000} + u_{00j}$$
$$\pi_{01j} = \gamma_{010} + u_{01j}$$
$$\pi_{02j} = \gamma_{020} + u_{02j}$$
$$\pi_{10j} = \gamma_{100} + u_{10j},$$

where γ_{100}represents the mean for all schools, and u_{10j} represents the deviation of school *j*'s slope from γ_{100}. The following equation is the combination of all previously defined levels for model 4:

$$Y_{tij} = \gamma_{000} + u_{00j} + \gamma_{010} Baseline_{ij} + u_{01j} Baseline_{ij} + \gamma_{020} Grade_{ij} + u_{02j} Grade_{ij} + \gamma_{100} Time_{tij} + u_{10j} Time_{tij} + r_{0ij} + e_{tij}$$

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Cross-validation

A k-fold cross-validation is a method that randomly splits a dataset into k equal parts or folds. It uses k-1 datasets to train the model and the remaining dataset to evaluate the model. We used a 10-fold cross-validation to investigate and compare the prediction accuracy of the multilevel models described in the previous subsection. Specifically, we examined the differences between these models using mean squared error (MSE), bias, absolute bias, and R^2. Table 4 reports these statistics across all models tested.

Table 4. Cross-validation multilevel models comparison

Model	MSE	Bias	Absolute bias	R2
Model 1	21527	0.944	104.5	0.622
Model 2	11356	0.184	72.7	0.801
Model 3	11356	0.184	72.7	0.801
Model 4	11774	5.677	74.7	0.796

We first compared the prediction accuracy of the four models using the MSE, which is the average of the squared differences between their actual scores and predicted scores. Models with an MSE closer to zero indicate superior prediction accuracy. Table 4 shows that model 2 (i.e., random intercepts and fixed slopes) tied with model 3 (i.e., polynomial random intercepts and fixed slopes), followed by model 4 (i.e., random intercepts and random slopes) and then model 1 (i.e., unconditional model). Figure 1 illustrates these differences.

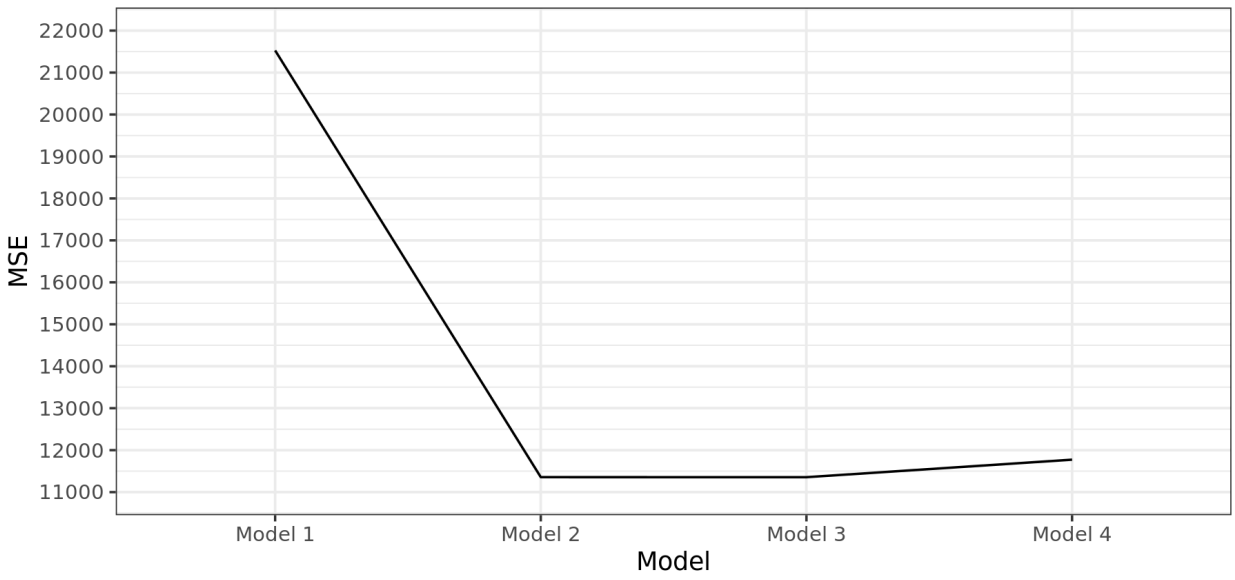

Figure 1: Cross-validation multilevel models comparison - Mean square error (MSE)

Next, we compared the bias in the predicted scores of these models, which is the average of the difference between the predicted scores and actual scores. Like MSE, models with a bias statistic

closer to zero indicate superior prediction accuracy. Models 2 (i.e., random intercepts and fixed slopes) and 3 (i.e., polynomial random intercepts and fixed slopes) tied for superior prediction accuracy, followed by model 1 (i.e., unconditional model), and then model 4 (i.e., random intercepts and random slopes). Positive values indicate that predictions tend to overestimate actual ability, which all models exhibited in this case, with model 4 being the worst. Figure 2 illustrates these differences.

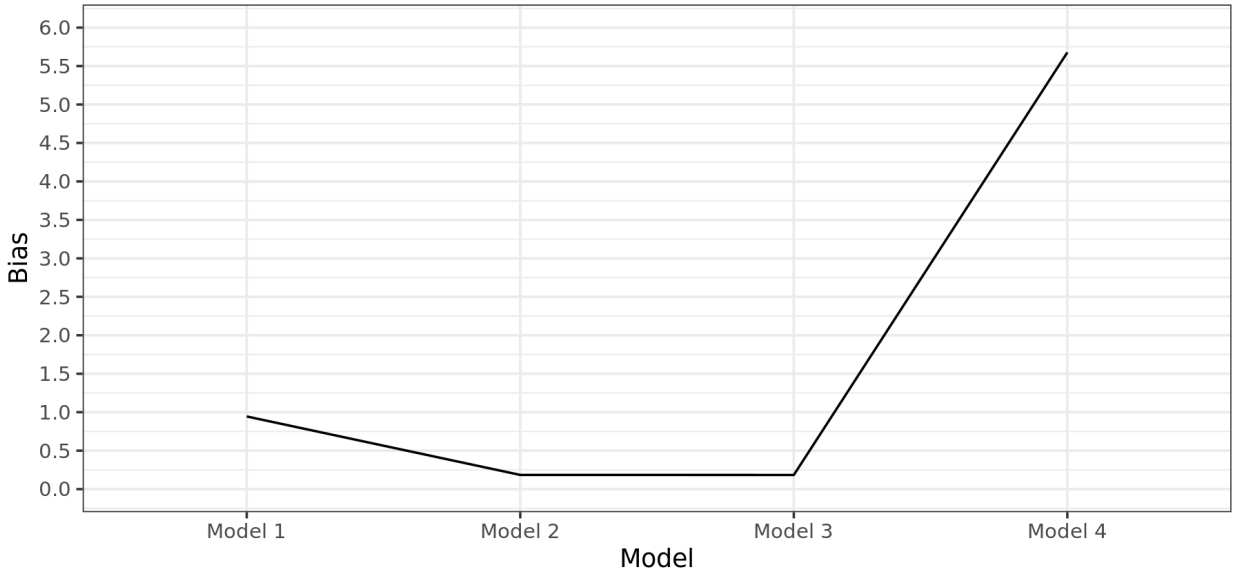

Figure 2: Cross-validation multilevel models comparison - Bias

We also investigated the differences in absolute bias between these models. Unlike bias, which trends closer to zero because over-predictions and under-predictions tend to cancel each other out, absolute bias accounts for the size of the differences between predicted scores and actual scores by aggregating absolute differences. Unlike absolute bias, bias can conceal larger differences between predicted scores and actual scores. Like bias, values of absolute bias closer to zero indicate superior prediction accuracy. Although model 1 (i.e., unconditional model) outperformed model 4 (i.e., random intercepts and random slopes) in bias, it performed the worst in absolute bias, followed by model 4 and then model 2 (i.e., random intercepts and fixed slopes), which again tied with model 3 (i.e., polynomial random intercepts and fixed slopes). Model 1 performed the worst in terms of the absolute size of differences between predicted scores and actual scores. Figure 3 illustrates the differences between models in terms of absolute bias.

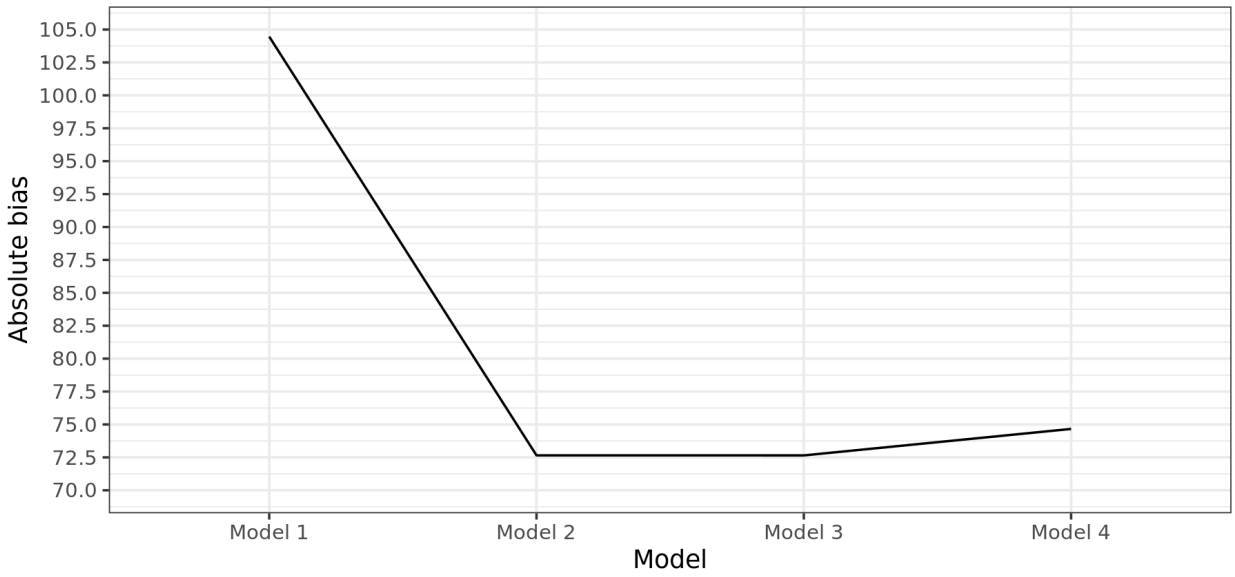

Figure 3: Cross-validation multilevel models comparison - Absolute bias

Next, we compared the differences in R^2 between the models, which measures the proportion of variance in the dependent variable (i.e., actual score) accounted for by the independent variable (i.e., predicted score). Values closer to one indicate superior prediction performance. Models 2 (i.e., random intercepts and fixed slopes) and 3 (i.e., polynomial random intercepts and fixed slopes) tied for superior prediction accuracy, followed by model 4 (i.e., random intercepts and random slopes), and then model 1 (i.e., unconditional model). Taking the square root of the R^2 provides a correlation coefficient, especially when regressing a dependent variable on a single independent variable. When regressing model 2's predicted scores onto actual scores, the correlation between predicted scores and actual scores was 0.894, surpassing Dorans and Walker's (2007) suggested minimum correlation of 0.866 for formal score alignment. Figure 4 illustrates the difference between the models in terms of R^2.

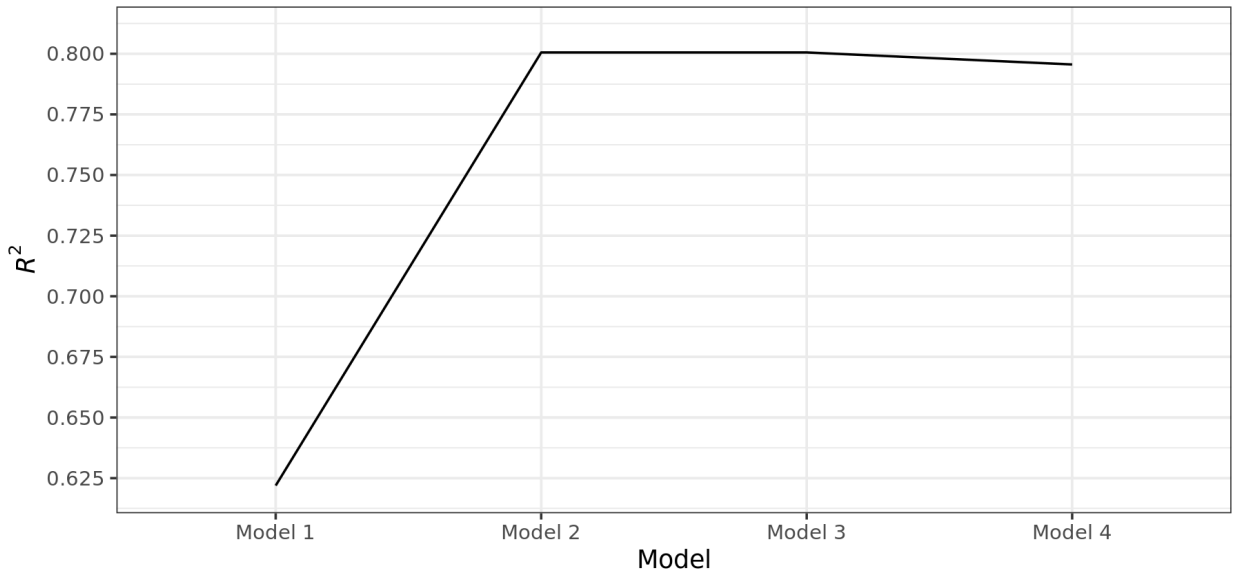

Figure 4: Cross-validation multilevel models comparison - R^2

Of the two models that tied for prediction superiority, we selected the more parsimonious model 2 to create the predicted growth norms. Some predicted scores exceeded the scale; thus, we capped them to be no less than zero and no more than 1200. Furthermore, we constrained scores to remain equivalent across time where the model predicted them to avoid confusion. The predicted scores associated with each grade and baseline score derived from this model are shown in Appendix B.

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APPENDIX A: ACHIEVEMENT NORMS

Table A1. Beginning-of-Year

Percentile	K	1	2	3	4	5	6	7	8
1	0	20	40	50	70	80	110	120	130
2	10	30	50	80	100	110	120	130	150
3	10	40	60	90	110	120	130	140	160
4	20	40	70	110	130	130	140	150	170
5	20	40	80	120	140	140	150	160	180
6	20	50	90	120	150	150	160	170	190
7	20	50	100	130	150	160	170	180	200
8	30	50	100	140	160	170	170	190	210
9	30	50	110	140	170	180	180	200	220
10	30	50	110	150	180	190	190	200	220
11	30	50	120	150	180	190	190	210	230
12	30	60	120	160	190	200	200	220	230
13	30	60	120	160	200	210	200	220	240
14	30	70	120	170	200	210	210	230	250
15	40	70	130	170	210	220	220	230	250
16	40	70	130	180	210	220	220	240	260
17	40	80	130	180	210	230	230	240	270
18	40	80	140	180	220	230	230	250	270
19	40	80	140	190	220	240	230	250	280
20	40	80	140	190	230	240	240	250	290
21	40	90	140	190	230	250	240	260	300
22	40	90	150	200	230	250	250	270	310
23	40	90	150	200	240	250	250	270	310
24	40	90	150	200	240	260	250	280	320
25	40	90	150	200	240	260	260	280	330
26	40	100	160	210	250	270	260	290	330
27	50	100	160	210	250	270	270	300	340
28	50	100	160	210	250	280	270	300	350
29	50	100	160	220	260	280	280	310	350
30	50	100	170	220	260	290	280	310	360
31	50	110	170	220	260	290	290	320	370
32	50	110	170	220	270	300	300	320	380
33	50	110	170	220	270	300	300	330	380

Table A1. Beginning-of-Year

Percentile	K	1	2	3	4	5	6	7	8
34	50	110	180	230	280	300	310	340	390
35	50	110	180	230	280	310	310	340	390
36	50	110	180	230	280	310	320	350	400
37	50	120	180	230	290	320	320	350	410
38	50	120	190	240	290	320	330	360	410
39	50	120	190	240	290	320	330	370	420
40	50	120	190	240	300	330	340	370	420
41	50	120	190	240	300	330	340	380	430
42	50	120	200	240	300	330	350	380	440
43	50	120	200	250	310	340	350	390	440
44	60	130	200	250	310	340	360	390	450
45	60	130	200	250	320	340	360	400	450
46	60	130	200	260	320	350	370	400	460
47	60	130	210	260	320	350	370	410	470
48	60	130	210	260	330	350	380	410	480
49	60	130	210	270	330	350	380	420	480
50	60	130	210	270	330	360	390	420	490
51	60	140	220	280	340	360	390	430	500
52	70	140	220	280	340	360	390	440	500
53	70	140	220	280	340	370	400	440	510
54	70	140	220	290	340	370	400	450	520
55	70	140	220	290	350	370	410	460	520
56	70	140	230	290	350	380	410	460	530
57	70	150	230	300	350	380	410	470	540
58	70	150	230	300	360	380	420	480	540
59	80	150	230	300	360	380	420	490	550
60	80	150	230	310	360	390	430	490	550
61	80	150	230	310	370	390	430	500	560
62	80	150	240	310	370	390	440	510	570
63	80	160	240	310	370	390	440	520	580
64	80	160	240	320	370	400	450	520	590
65	90	160	240	320	380	400	460	530	590
66	90	160	240	320	380	400	470	540	600
67	90	170	250	330	380	410	470	540	610
68	90	170	250	330	390	410	480	550	620
69	90	170	250	330	390	410	490	560	630
70	90	170	250	340	390	420	500	570	640
71	100	180	260	340	390	420	500	580	650
72	100	180	260	340	400	430	510	590	660
73	100	180	270	350	400	430	520	600	670

Table A1. Beginning-of-Year

Percentile	K	1	2	3	4	5	6	7	8
74	100	180	270	350	400	430	530	610	680
75	100	190	270	350	410	440	530	620	690
76	100	190	280	350	410	440	540	630	700
77	110	190	280	360	420	440	550	640	710
78	110	200	280	360	420	450	560	650	730
79	110	200	290	360	420	450	570	660	740
80	110	200	290	370	430	460	580	670	750
81	110	200	300	370	430	470	590	680	760
82	120	210	300	370	430	480	600	690	780
83	120	210	300	380	440	490	620	710	790
84	120	210	310	380	440	500	630	720	800
85	120	220	310	390	440	510	650	740	810
86	130	220	320	390	450	520	660	750	830
87	130	220	320	400	450	520	680	770	840
88	130	230	330	400	460	530	700	780	850
89	130	230	330	410	470	540	720	790	860
90	140	240	340	420	480	550	730	810	880
91	140	240	350	420	490	570	750	830	890
92	140	250	350	430	500	590	770	840	910
93	150	250	360	440	510	620	800	860	930
94	150	260	370	450	520	650	830	880	950
95	160	280	390	460	540	680	860	900	990
96	170	300	400	470	560	730	880	930	1040
97	180	310	420	500	600	780	910	980	1160
98	200	340	440	530	650	860	960	1060	1200
99	230	390	480	620	800	950	1090	1200	1200

Table A2. Middle-of-Year

Percentile	K	1	2	3	4	5	6	7	8
1	20	40	70	100	120	130	130	130	130
2	30	50	90	120	150	160	160	160	150
3	30	50	110	140	160	180	180	180	170
4	40	70	120	150	180	200	190	190	190
5	40	70	130	160	190	210	210	210	210
6	40	80	140	170	200	220	220	220	220
7	40	90	140	170	210	230	230	230	230
8	40	90	150	180	220	240	230	240	240
9	50	100	150	190	230	250	240	240	250
10	50	100	150	190	240	250	250	250	250
11	50	100	160	200	240	260	250	260	260
12	50	110	160	200	250	270	260	260	270
13	50	110	160	210	250	270	270	270	280
14	50	110	170	210	250	280	270	280	290
15	50	120	170	220	260	290	280	290	300
16	60	120	170	220	270	300	290	300	310
17	60	120	180	230	270	300	290	300	320
18	60	130	180	230	270	310	300	310	320
19	60	130	180	230	280	320	310	320	330
20	60	130	180	240	280	320	320	330	340
21	70	130	190	240	290	330	320	330	350
22	70	140	190	240	290	340	330	340	360
23	70	140	190	250	300	340	340	350	370
24	70	140	190	250	300	350	340	350	370
25	70	140	200	250	310	350	350	360	380
26	70	150	200	250	310	360	350	370	390
27	80	150	200	260	320	360	360	380	400
28	80	150	210	260	320	370	360	380	400
29	80	150	210	260	330	370	370	390	410
30	80	150	210	270	330	380	380	400	420
31	80	150	210	270	340	380	380	400	420
32	80	150	220	270	340	390	390	410	430
33	80	160	220	270	340	390	400	420	440
34	80	160	220	280	350	390	400	420	450
35	90	160	220	280	350	400	410	430	450
36	90	160	230	280	350	400	410	440	460
37	90	160	230	280	360	410	420	440	470
38	90	170	230	280	360	410	420	450	480
39	90	170	230	290	360	410	430	460	490

Table A2. Middle-of-Year

Percentile	K	1	2	3	4	5	6	7	8
40	90	170	240	290	370	420	430	460	500
41	90	170	240	290	370	420	440	470	500
42	100	170	240	290	370	430	440	480	510
43	100	170	240	300	380	430	450	490	520
44	100	170	240	300	380	430	450	490	520
45	100	170	250	300	380	440	460	500	530
46	100	180	250	300	380	440	460	510	540
47	100	180	250	310	390	440	470	510	550
48	100	180	250	310	390	450	470	520	550
49	100	180	250	310	390	450	480	530	560
50	110	180	260	310	390	450	480	530	570
51	110	180	260	320	400	450	490	540	580
52	110	180	260	320	400	460	490	550	580
53	110	180	260	320	400	460	500	550	590
54	110	180	260	320	400	460	500	560	600
55	110	180	270	330	410	470	510	570	610
56	110	190	270	330	410	470	510	570	620
57	120	190	270	330	410	470	520	580	620
58	120	190	270	340	420	480	520	590	630
59	120	190	270	340	420	480	530	600	640
60	120	190	280	340	420	480	530	600	650
61	120	190	280	340	420	480	530	610	660
62	120	190	280	350	430	490	540	620	670
63	120	190	280	350	430	490	540	620	680
64	130	200	280	350	430	490	550	630	680
65	130	200	280	360	430	490	550	640	690
66	130	200	280	360	440	500	560	650	700
67	130	200	280	360	440	500	570	660	710
68	130	200	290	360	440	500	570	660	720
69	130	200	290	370	440	500	580	670	730
70	140	210	290	370	440	510	590	680	740
71	140	210	290	370	450	510	590	690	750
72	140	210	290	370	450	510	600	700	760
73	140	210	290	380	450	520	600	710	760
74	140	210	290	380	450	520	610	720	770
75	140	220	290	380	460	520	620	730	780
76	150	220	300	390	460	530	630	740	790
77	150	220	300	390	460	530	630	740	800
78	150	220	300	390	470	530	640	750	810
79	150	230	300	390	470	540	650	760	820

Table A2. Middle-of-Year

Percentile	K	1	2	3	4	5	6	7	8
80	150	230	300	390	470	540	650	770	830
81	160	230	300	400	480	550	660	780	840
82	160	240	310	400	480	550	670	790	850
83	160	240	310	400	480	560	680	800	860
84	160	240	310	410	490	560	690	800	870
85	170	240	310	410	490	570	700	810	880
86	170	250	320	410	490	580	710	820	890
87	170	250	320	420	490	580	720	820	900
88	180	260	320	420	500	590	730	830	910
89	180	260	330	430	500	600	740	840	920
90	180	270	330	430	500	610	750	850	940
91	180	270	340	440	510	620	770	860	950
92	190	280	350	440	510	630	780	860	980
93	190	280	360	450	510	640	790	870	1010
94	190	290	370	460	520	660	810	890	1040
95	200	290	380	470	530	680	820	900	1100
96	200	300	390	480	540	720	840	930	1190
97	210	300	400	490	550	770	860	960	1200
98	220	310	420	500	580	820	880	1030	1200
99	240	330	450	520	650	860	930	1200	1200

Table A3. End-of-Year

Percentile	K	1	2	3	4	5	6	7	8
1	20	50	70	100	130	130	130	120	120
2	30	60	110	130	150	160	160	150	150
3	40	80	120	150	170	180	180	170	170
4	40	90	130	160	190	200	200	190	190
5	50	100	140	170	210	220	220	210	200
6	50	110	150	180	220	230	230	220	220
7	50	110	150	190	230	240	230	230	230
8	60	120	160	200	240	250	240	240	240
9	60	120	170	210	240	250	250	250	250
10	70	130	170	220	250	260	260	250	250
11	70	130	170	220	260	270	260	260	260
12	70	140	180	230	260	280	270	270	270
13	70	140	180	230	270	290	280	280	280
14	80	140	190	240	280	300	290	290	290
15	80	150	190	240	280	300	300	300	300
16	80	150	200	250	290	310	310	310	310
17	80	150	200	250	300	320	310	320	320
18	90	150	210	250	300	330	320	330	330
19	90	160	210	260	310	340	330	340	340
20	90	160	210	260	320	340	340	350	350
21	90	160	220	270	320	350	340	350	360
22	90	160	220	270	330	350	350	360	370
23	100	170	230	270	340	360	360	370	380
24	100	170	230	280	340	370	360	380	390
25	100	170	230	280	350	370	370	390	400
26	100	170	240	290	350	380	380	400	400
27	110	170	240	290	360	380	390	410	410
28	110	170	240	290	360	390	390	410	420
29	110	180	240	300	370	390	400	420	430
30	110	180	250	300	380	400	410	430	440
31	110	180	250	310	380	410	410	440	450
32	110	180	250	310	390	410	420	450	460
33	120	180	250	310	390	420	430	450	470
34	120	180	250	320	400	420	430	460	480
35	120	180	260	320	400	430	440	470	490
36	120	180	260	330	400	430	450	480	500
37	120	190	260	330	410	430	450	490	510
38	130	190	270	340	410	440	460	500	510
39	130	190	270	340	420	440	470	510	520

Table A3. End-of-Year

Percentile	K	1	2	3	4	5	6	7	8
40	130	190	270	340	420	450	470	520	530
41	130	190	270	350	420	450	480	520	540
42	130	190	270	350	430	450	480	530	550
43	130	190	270	350	430	460	490	540	550
44	140	200	280	360	430	460	500	550	560
45	140	200	280	360	440	470	500	550	570
46	140	200	280	360	440	470	510	560	580
47	140	200	280	360	440	480	510	570	590
48	140	200	280	370	440	480	520	580	600
49	140	210	280	370	450	480	530	580	610
50	140	210	280	370	450	490	530	590	620
51	150	210	290	370	450	490	540	600	630
52	150	210	290	380	460	490	540	610	640
53	150	210	290	380	460	500	550	620	650
54	150	210	290	380	460	500	550	630	650
55	150	220	290	380	460	500	560	640	660
56	150	220	290	380	470	510	570	640	670
57	150	220	290	390	470	510	580	650	680
58	160	220	290	390	470	520	590	660	690
59	160	230	290	390	470	520	590	670	700
60	160	230	300	390	480	520	600	680	710
61	160	230	300	390	480	530	610	690	720
62	160	230	300	400	480	530	620	700	730
63	160	240	300	400	480	540	630	710	740
64	170	240	300	400	480	540	630	720	750
65	170	240	300	400	490	540	640	730	760
66	170	240	310	400	490	550	650	740	770
67	170	240	310	400	490	550	660	750	780
68	170	250	310	410	490	560	670	760	790
69	170	250	310	410	490	560	670	770	800
70	170	250	310	410	490	570	680	780	810
71	180	250	320	410	500	570	690	780	820
72	180	250	320	420	500	580	690	790	840
73	180	260	320	420	500	580	700	800	850
74	180	260	320	420	500	590	710	810	860
75	180	260	330	430	500	590	710	810	870
76	180	270	330	430	500	600	720	820	880
77	180	270	330	430	510	600	730	820	890
78	190	270	340	430	510	600	730	830	890
79	190	270	340	440	510	610	740	840	900

Table A3. End-of-Year

Percentile	K	1	2	3	4	5	6	7	8
80	190	280	340	440	510	610	750	840	910
81	190	280	350	440	520	620	760	850	920
82	190	280	350	450	520	620	760	860	930
83	190	280	360	450	520	630	770	860	930
84	190	290	360	450	520	630	780	870	940
85	200	290	370	460	530	640	790	870	940
86	200	290	370	460	530	650	800	880	950
87	200	290	380	470	530	660	810	890	960
88	200	290	380	470	540	670	810	890	970
89	210	300	390	480	540	680	820	900	980
90	210	300	390	480	550	700	830	920	990
91	210	300	400	490	550	720	840	930	1010
92	220	300	400	490	570	730	850	940	1020
93	220	310	410	500	580	750	860	950	1040
94	230	310	410	500	590	770	870	960	1090
95	240	320	420	510	610	800	880	990	1150
96	250	320	430	520	630	820	910	1010	1200
97	260	330	440	530	660	850	930	1050	1200
98	280	350	460	550	710	870	980	1190	1200
99	310	380	500	600	820	920	1080	1200	1200

APPENDIX B: PREDICTED GROWTH NORMS

This table provides a growth projection across all grades and possible baseline scores for a 10 month school year. To determine the projected growth score of a student, begin by finding the student's rostered grade. Then identify the first LevelUp score attained by the student, preferably in the beginning of the academic year, in the "base" column in the table. Each subsequent column in that row provides the predicted score for each month following the initial score.

Grade	Base	1	2	3	4	5	6	7	8	9	10
K	0	10	20	30	50	60	70	80	100	110	120
K	10	10	30	40	50	70	80	90	100	120	130
K	20	20	40	50	60	70	90	100	110	130	140
K	30	30	40	60	70	80	100	110	120	130	150
K	40	40	50	60	80	90	100	120	130	140	150
K	50	50	60	70	90	100	110	120	140	150	160
K	60	60	70	80	90	110	120	130	140	160	170
K	70	70	80	90	100	110	130	140	150	170	180
K	80	80	80	100	110	120	140	150	160	170	190
K	90	90	90	100	120	130	140	160	170	180	190
K	100	100	100	110	130	140	150	160	180	190	200
K	110	110	110	120	130	150	160	170	190	200	210
K	120	120	120	130	140	150	170	180	190	210	220
K	130	130	130	140	150	160	180	190	200	210	230
K	140	140	140	150	160	170	180	200	210	220	240
K	150	150	150	150	170	180	190	200	220	230	240
K	160	160	160	160	170	190	200	210	230	240	250
K	170	170	170	170	180	200	210	220	230	250	260
K	180	180	180	180	190	200	220	230	240	250	270
K	190	190	190	190	200	210	220	240	250	260	280
K	200	200	200	200	210	220	230	250	260	270	280
K	210	210	210	210	210	230	240	250	270	280	290
K	220	220	220	220	220	240	250	260	270	290	300
K	230	230	230	230	230	240	260	270	280	300	310
K	240	240	240	240	240	250	260	280	290	300	320
K	250	250	250	250	250	260	270	290	300	310	320

Grade	Base	1	2	3	4	5	6	7	8	9	10
K	260	260	260	260	260	270	280	290	310	320	330
K	270	270	270	270	270	280	290	300	310	330	340
K	280	280	280	280	280	280	300	310	320	340	350
K	290	290	290	290	290	290	310	320	330	340	360
1	0	20	40	50	60	80	90	100	110	130	140
1	10	30	50	60	70	80	100	110	120	140	150
1	20	40	50	70	80	90	110	120	130	140	160
1	30	50	60	70	90	100	110	130	140	150	160
1	40	60	70	80	100	110	120	130	150	160	170
1	50	70	80	90	100	120	130	140	150	170	180
1	60	70	90	100	110	120	140	150	160	180	190
1	70	80	90	110	120	130	150	160	170	180	200
1	80	90	100	120	130	140	150	170	180	190	200
1	90	100	110	120	140	150	160	170	190	200	210
1	100	110	120	130	140	160	170	180	200	210	220
1	110	110	130	140	150	160	180	190	200	220	230
1	120	120	130	150	160	170	190	200	210	220	240
1	130	130	140	160	170	180	190	210	220	230	250
1	140	140	150	160	180	190	200	210	230	240	250
1	150	150	160	170	180	200	210	220	240	250	260
1	160	160	170	180	190	210	220	230	240	260	270
1	170	170	170	190	200	210	230	240	250	260	280
1	180	180	180	200	210	220	230	250	260	270	290
1	190	190	190	200	220	230	240	260	270	280	290
1	200	200	200	210	220	240	250	260	280	290	300
1	210	210	210	220	230	250	260	270	280	300	310
1	220	220	220	230	240	250	270	280	290	310	320
1	230	230	230	240	250	260	270	290	300	310	330
1	240	240	240	240	260	270	280	300	310	320	330
1	250	250	250	250	270	280	290	300	320	330	340
1	260	260	260	260	270	290	300	310	320	340	350
1	270	270	270	270	280	290	310	320	330	350	360
1	280	280	280	280	290	300	320	330	340	350	370
1	290	290	290	290	300	310	320	340	350	360	370
1	300	300	300	300	310	320	330	340	360	370	380
1	310	310	310	310	310	330	340	350	360	380	390

Grade	Base	1	2	3	4	5	6	7	8	9	10
1	320	320	320	320	320	330	350	360	370	390	400
1	330	330	330	330	330	340	360	370	380	390	410
1	340	340	340	340	340	350	360	380	390	400	410
1	350	350	350	350	350	360	370	380	400	410	420
1	360	360	360	360	360	370	380	390	410	420	430
1	370	370	370	370	370	380	390	400	410	430	440
1	380	380	380	380	380	380	400	410	420	430	450
1	390	390	390	390	390	390	400	420	430	440	460
2	0	40	60	70	80	90	110	120	130	150	160
2	10	50	60	80	90	100	120	130	140	150	170
2	20	60	70	80	100	110	120	140	150	160	170
2	30	70	80	90	110	120	130	140	160	170	180
2	40	80	90	100	110	130	140	150	160	180	190
2	50	80	100	110	120	130	150	160	170	190	200
2	60	90	100	120	130	140	160	170	180	190	210
2	70	100	110	130	140	150	160	180	190	200	210
2	80	110	120	130	150	160	170	180	200	210	220
2	90	120	130	140	150	170	180	190	210	220	230
2	100	120	140	150	160	170	190	200	210	230	240
2	110	130	140	160	170	180	200	210	220	230	250
2	120	140	150	170	180	190	200	220	230	240	260
2	130	150	160	170	190	200	210	220	240	250	260
2	140	160	170	180	190	210	220	230	250	260	270
2	150	160	180	190	200	220	230	240	250	270	280
2	160	170	180	200	210	220	240	250	260	270	290
2	170	180	190	210	220	230	240	260	270	280	300
2	180	190	200	210	230	240	250	270	280	290	300
2	190	200	210	220	230	250	260	270	290	300	310
2	200	200	220	230	240	260	270	280	290	310	320
2	210	210	230	240	250	260	280	290	300	320	330
2	220	220	230	250	260	270	280	300	310	320	340
2	230	230	240	250	270	280	290	310	320	330	340
2	240	240	250	260	280	290	300	310	330	340	350
2	250	250	260	270	280	300	310	320	330	350	360
2	260	260	270	280	290	300	320	330	340	360	370
2	270	270	270	290	300	310	330	340	350	360	380

Grade	Base	1	2	3	4	5	6	7	8	9	10
2	280	280	280	290	310	320	330	350	360	370	380
2	290	290	290	300	320	330	340	350	370	380	390
2	300	300	300	310	320	340	350	360	380	390	400
2	310	310	310	320	330	340	360	370	380	400	410
2	320	320	320	330	340	350	370	380	390	400	420
2	330	330	330	340	350	360	370	390	400	410	420
2	340	340	340	340	360	370	380	390	410	420	430
2	350	350	350	350	360	380	390	400	420	430	440
2	360	360	360	360	370	380	400	410	420	440	450
2	370	370	370	370	380	390	410	420	430	440	460
2	380	380	380	380	390	400	410	430	440	450	470
2	390	390	390	390	400	410	420	430	450	460	470
2	400	400	400	400	400	420	430	440	460	470	480
2	410	410	410	410	410	430	440	450	460	480	490
2	420	420	420	420	420	430	450	460	470	480	500
2	430	430	430	430	430	440	450	470	480	490	510
2	440	440	440	440	440	450	460	480	490	500	510
2	450	450	450	450	450	460	470	480	500	510	520
2	460	460	460	460	460	470	480	490	500	520	530
2	470	470	470	470	470	470	490	500	510	530	540
2	480	480	480	480	480	480	490	510	520	530	550
2	490	490	490	490	490	490	500	520	530	540	550
3	0	60	70	90	100	110	130	140	150	160	180
3	10	70	80	90	110	120	130	150	160	170	180
3	20	80	90	100	120	130	140	150	170	180	190
3	30	90	100	110	120	140	150	160	170	190	200
3	40	90	110	120	130	140	160	170	180	200	210
3	50	100	110	130	140	150	170	180	190	200	220
3	60	110	120	140	150	160	170	190	200	210	220
3	70	120	130	140	160	170	180	190	210	220	230
3	80	130	140	150	160	180	190	200	220	230	240
3	90	130	150	160	170	180	200	210	220	240	250
3	100	140	150	170	180	190	210	220	230	240	260
3	110	150	160	180	190	200	210	230	240	250	270
3	120	160	170	180	200	210	220	230	250	260	270
3	130	170	180	190	200	220	230	240	260	270	280

Grade	Base	1	2	3	4	5	6	7	8	9	10
3	140	170	190	200	210	230	240	250	260	280	290
3	150	180	190	210	220	230	250	260	270	280	300
3	160	190	200	220	230	240	250	270	280	290	310
3	170	200	210	220	240	250	260	280	290	300	310
3	180	210	220	230	240	260	270	280	300	310	320
3	190	210	230	240	250	270	280	290	300	320	330
3	200	220	240	250	260	270	290	300	310	330	340
3	210	230	240	260	270	280	290	310	320	330	350
3	220	240	250	260	280	290	300	320	330	340	350
3	230	250	260	270	290	300	310	320	340	350	360
3	240	250	270	280	290	310	320	330	340	360	370
3	250	260	280	290	300	310	330	340	350	370	380
3	260	270	280	300	310	320	340	350	360	370	390
3	270	280	290	300	320	330	340	360	370	380	390
3	280	290	300	310	330	340	350	360	380	390	400
3	290	300	310	320	330	350	360	370	390	400	410
3	300	300	320	330	340	350	370	380	390	410	420
3	310	310	320	340	350	360	380	390	400	410	430
3	320	320	330	350	360	370	380	400	410	420	440
3	330	330	340	350	370	380	390	400	420	430	440
3	340	340	350	360	370	390	400	410	430	440	450
3	350	350	360	370	380	400	410	420	430	450	460
3	360	360	360	380	390	400	420	430	440	450	470
3	370	370	370	390	400	410	420	440	450	460	480
3	380	380	380	390	410	420	430	440	460	470	480
3	390	390	390	400	410	430	440	450	470	480	490
3	400	400	400	410	420	440	450	460	470	490	500
3	410	410	410	420	430	440	460	470	480	490	510
3	420	420	420	430	440	450	460	480	490	500	520
3	430	430	430	430	450	460	470	490	500	510	520
3	440	440	440	440	450	470	480	490	510	520	530
3	450	450	450	450	460	480	490	500	510	530	540
3	460	460	460	460	470	480	500	510	520	540	550
3	470	470	470	470	480	490	500	520	530	540	560
3	480	480	480	480	490	500	510	530	540	550	560
3	490	490	490	490	500	510	520	530	550	560	570

Grade	Base	1	2	3	4	5	6	7	8	9	10
3	500	500	500	500	500	520	530	540	550	570	580
3	510	510	510	510	510	520	540	550	560	580	590
3	520	520	520	520	520	530	550	560	570	580	600
3	530	530	530	530	530	540	550	570	580	590	600
3	540	540	540	540	540	550	560	570	590	600	610
3	550	550	550	550	550	560	570	580	600	610	620
3	560	560	560	560	560	560	580	590	600	620	630
3	570	570	570	570	570	570	590	600	610	620	640
3	580	580	580	580	580	580	590	610	620	630	640
3	590	590	590	590	590	590	600	610	630	640	650
4	0	80	90	100	120	130	140	160	170	180	190
4	10	90	100	110	130	140	150	160	180	190	200
4	20	100	110	120	130	150	160	170	180	200	210
4	30	100	120	130	140	150	170	180	190	210	220
4	40	110	120	140	150	160	180	190	200	210	230
4	50	120	130	150	160	170	180	200	210	220	230
4	60	130	140	150	170	180	190	200	220	230	240
4	70	140	150	160	170	190	200	210	230	240	250
4	80	140	160	170	180	200	210	220	230	250	260
4	90	150	160	180	190	200	220	230	240	250	270
4	100	160	170	190	200	210	220	240	250	260	280
4	110	170	180	190	210	220	230	240	260	270	280
4	120	180	190	200	210	230	240	250	270	280	290
4	130	180	200	210	220	240	250	260	270	290	300
4	140	190	200	220	230	240	260	270	280	290	310
4	150	200	210	230	240	250	260	280	290	300	320
4	160	210	220	230	250	260	270	290	300	310	320
4	170	220	230	240	250	270	280	290	310	320	330
4	180	220	240	250	260	280	290	300	310	330	340
4	190	230	250	260	270	280	300	310	320	340	350
4	200	240	250	270	280	290	300	320	330	340	360
4	210	250	260	270	290	300	310	330	340	350	360
4	220	260	270	280	300	310	320	330	350	360	370
4	230	260	280	290	300	320	330	340	350	370	380
4	240	270	290	300	310	320	340	350	360	380	390
4	250	280	290	310	320	330	350	360	370	380	400

Grade	Base	1	2	3	4	5	6	7	8	9	10
4	260	290	300	310	330	340	350	370	380	390	400
4	270	300	310	320	340	350	360	370	390	400	410
4	280	310	320	330	340	360	370	380	400	410	420
4	290	310	330	340	350	360	380	390	400	420	430
4	300	320	330	350	360	370	390	400	410	420	440
4	310	330	340	360	370	380	390	410	420	430	450
4	320	340	350	360	380	390	400	410	430	440	450
4	330	350	360	370	380	400	410	420	440	450	460
4	340	350	370	380	390	410	420	430	440	460	470
4	350	360	370	390	400	410	430	440	450	460	480
4	360	370	380	400	410	420	430	450	460	470	490
4	370	380	390	400	420	430	440	450	470	480	490
4	380	390	400	410	420	440	450	460	480	490	500
4	390	390	410	420	430	450	460	470	480	500	510
4	400	400	420	430	440	450	470	480	490	500	520
4	410	410	420	440	450	460	470	490	500	510	530
4	420	420	430	440	460	470	480	500	510	520	530
4	430	430	440	450	460	480	490	500	520	530	540
4	440	440	450	460	470	490	500	510	520	540	550
4	450	450	460	470	480	490	510	520	530	550	560
4	460	460	460	480	490	500	510	530	540	550	570
4	470	470	470	480	500	510	520	540	550	560	570
4	480	480	480	490	510	520	530	540	560	570	580
4	490	490	490	500	510	530	540	550	560	580	590
4	500	500	500	510	520	530	550	560	570	590	600
4	510	510	510	520	530	540	560	570	580	590	610
4	520	520	520	520	540	550	560	580	590	600	610
4	530	530	530	530	550	560	570	580	600	610	620
4	540	540	540	540	550	570	580	590	610	620	630
4	550	550	550	550	560	570	590	600	610	630	640
4	560	560	560	560	570	580	600	610	620	630	650
4	570	570	570	570	580	590	600	620	630	640	660
4	580	580	580	580	590	600	610	620	640	650	660
4	590	590	590	590	590	610	620	630	650	660	670
4	600	600	600	600	600	620	630	640	650	670	680
4	610	610	610	610	610	620	640	650	660	670	690

Grade	Base	1	2	3	4	5	6	7	8	9	10
4	620	620	620	620	620	630	640	660	670	680	700
4	630	630	630	630	630	640	650	660	680	690	700
4	640	640	640	640	640	650	660	670	690	700	710
4	650	650	650	650	650	660	670	680	690	710	720
4	660	660	660	660	660	660	680	690	700	710	730
4	670	670	670	670	670	670	680	700	710	720	740
4	680	680	680	680	680	680	690	710	720	730	740
4	690	690	690	690	690	690	700	710	730	740	750
5	0	100	110	120	140	150	160	170	190	200	210
5	10	110	120	130	140	160	170	180	200	210	220
5	20	110	130	140	150	160	180	190	200	220	230
5	30	120	130	150	160	170	190	200	210	220	240
5	40	130	140	160	170	180	190	210	220	230	240
5	50	140	150	160	180	190	200	210	230	240	250
5	60	150	160	170	180	200	210	220	240	250	260
5	70	150	170	180	190	210	220	230	240	260	270
5	80	160	170	190	200	210	230	240	250	260	280
5	90	170	180	200	210	220	230	250	260	270	290
5	100	180	190	200	220	230	240	250	270	280	290
5	110	190	200	210	220	240	250	260	280	290	300
5	120	190	210	220	230	250	260	270	280	300	310
5	130	200	220	230	240	250	270	280	290	300	320
5	140	210	220	240	250	260	270	290	300	310	330
5	150	220	230	240	260	270	280	300	310	320	330
5	160	230	240	250	260	280	290	300	320	330	340
5	170	230	250	260	270	290	300	310	320	340	350
5	180	240	260	270	280	290	310	320	330	350	360
5	190	250	260	280	290	300	310	330	340	350	370
5	200	260	270	280	300	310	320	340	350	360	370
5	210	270	280	290	310	320	330	340	360	370	380
5	220	270	290	300	310	330	340	350	360	380	390
5	230	280	300	310	320	330	350	360	370	390	400
5	240	290	300	320	330	340	360	370	380	390	410
5	250	300	310	320	340	350	360	380	390	400	410
5	260	310	320	330	350	360	370	380	400	410	420
5	270	320	330	340	350	370	380	390	410	420	430

Grade	Base	1	2	3	4	5	6	7	8	9	10
5	280	320	340	350	360	370	390	400	410	430	440
5	290	330	340	360	370	380	400	410	420	430	450
5	300	340	350	370	380	390	400	420	430	440	460
5	310	350	360	370	390	400	410	420	440	450	460
5	320	360	370	380	390	410	420	430	450	460	470
5	330	360	380	390	400	420	430	440	450	470	480
5	340	370	380	400	410	420	440	450	460	470	490
5	350	380	390	410	420	430	440	460	470	480	500
5	360	390	400	410	430	440	450	470	480	490	500
5	370	400	410	420	430	450	460	470	490	500	510
5	380	400	420	430	440	460	470	480	490	510	520
5	390	410	430	440	450	460	480	490	500	510	530
5	400	420	430	450	460	470	480	500	510	520	540
5	410	430	440	450	470	480	490	510	520	530	540
5	420	440	450	460	470	490	500	510	530	540	550
5	430	440	460	470	480	500	510	520	530	550	560
5	440	450	470	480	490	500	520	530	540	560	570
5	450	460	470	490	500	510	520	540	550	560	580
5	460	470	480	490	510	520	530	550	560	570	580
5	470	480	490	500	520	530	540	550	570	580	590
5	480	480	500	510	520	540	550	560	570	590	600
5	490	490	510	520	530	540	560	570	580	600	610
5	500	500	510	530	540	550	570	580	590	600	620
5	510	510	520	530	550	560	570	590	600	610	620
5	520	520	530	540	560	570	580	590	610	620	630
5	530	530	540	550	560	580	590	600	620	630	640
5	540	540	550	560	570	580	600	610	620	640	650
5	550	550	550	570	580	590	610	620	630	640	660
5	560	560	560	580	590	600	610	630	640	650	670
5	570	570	570	580	600	610	620	630	650	660	670
5	580	580	580	590	600	620	630	640	660	670	680
5	590	590	590	600	610	630	640	650	660	680	690
5	600	600	600	610	620	630	650	660	670	680	700
5	610	610	610	620	630	640	650	670	680	690	710
5	620	620	620	620	640	650	660	680	690	700	710
5	630	630	630	630	640	660	670	680	700	710	720

Grade	Base	1	2	3	4	5	6	7	8	9	10
5	640	640	640	640	650	670	680	690	700	720	730
5	650	650	650	650	660	670	690	700	710	720	740
5	660	660	660	660	670	680	690	710	720	730	750
5	670	670	670	670	680	690	700	720	730	740	750
5	680	680	680	680	680	700	710	720	740	750	760
5	690	690	690	690	690	710	720	730	740	760	770
5	700	700	700	700	700	710	730	740	750	770	780
5	710	710	710	710	710	720	730	750	760	770	790
5	720	720	720	720	720	730	740	760	770	780	790
5	730	730	730	730	730	740	750	760	780	790	800
5	740	740	740	740	740	750	760	770	780	800	810
5	750	750	750	750	750	750	770	780	790	810	820
5	760	760	760	760	760	760	780	790	800	810	830
5	770	770	770	770	770	770	780	800	810	820	830
5	780	780	780	780	780	780	790	800	820	830	840
5	790	790	790	790	790	790	800	810	830	840	850
6	0	120	130	140	150	170	180	190	210	220	230
6	10	120	140	150	160	170	190	200	210	230	240
6	20	130	140	160	170	180	200	210	220	230	250
6	30	140	150	170	180	190	200	220	230	240	260
6	40	150	160	170	190	200	210	220	240	250	260
6	50	160	170	180	190	210	220	230	250	260	270
6	60	160	180	190	200	220	230	240	250	270	280
6	70	170	180	200	210	220	240	250	260	270	290
6	80	180	190	210	220	230	240	260	270	280	300
6	90	190	200	210	230	240	250	260	280	290	300
6	100	200	210	220	230	250	260	270	290	300	310
6	110	200	220	230	240	260	270	280	290	310	320
6	120	210	220	240	250	260	280	290	300	310	330
6	130	220	230	250	260	270	280	300	310	320	340
6	140	230	240	250	270	280	290	310	320	330	340
6	150	240	250	260	280	290	300	310	330	340	350
6	160	240	260	270	280	300	310	320	330	350	360
6	170	250	270	280	290	300	320	330	340	360	370
6	180	260	270	290	300	310	320	340	350	360	380
6	190	270	280	290	310	320	330	350	360	370	380

Grade	Base	1	2	3	4	5	6	7	8	9	10
6	200	280	290	300	320	330	340	350	370	380	390
6	210	280	300	310	320	340	350	360	370	390	400
6	220	290	310	320	330	340	360	370	380	400	410
6	230	300	310	330	340	350	370	380	390	400	420
6	240	310	320	330	350	360	370	390	400	410	420
6	250	320	330	340	360	370	380	390	410	420	430
6	260	330	340	350	360	380	390	400	420	430	440
6	270	330	350	360	370	380	400	410	420	440	450
6	280	340	350	370	380	390	410	420	430	440	460
6	290	350	360	380	390	400	410	430	440	450	470
6	300	360	370	380	400	410	420	430	450	460	470
6	310	370	380	390	400	420	430	440	460	470	480
6	320	370	390	400	410	430	440	450	460	480	490
6	330	380	390	410	420	430	450	460	470	480	500
6	340	390	400	420	430	440	450	470	480	490	510
6	350	400	410	420	440	450	460	480	490	500	510
6	360	410	420	430	440	460	470	480	500	510	520
6	370	410	430	440	450	470	480	490	500	520	530
6	380	420	440	450	460	470	490	500	510	520	540
6	390	430	440	460	470	480	490	510	520	530	550
6	400	440	450	460	480	490	500	520	530	540	550
6	410	450	460	470	480	500	510	520	540	550	560
6	420	450	470	480	490	510	520	530	540	560	570
6	430	460	480	490	500	510	530	540	550	570	580
6	440	470	480	500	510	520	530	550	560	570	590
6	450	480	490	500	520	530	540	560	570	580	590
6	460	490	500	510	530	540	550	560	580	590	600
6	470	490	510	520	530	550	560	570	580	600	610
6	480	500	520	530	540	550	570	580	590	610	620
6	490	510	520	540	550	560	580	590	600	610	630
6	500	520	530	540	560	570	580	600	610	620	630
6	510	530	540	550	570	580	590	600	620	630	640
6	520	540	550	560	570	590	600	610	630	640	650
6	530	540	560	570	580	590	610	620	630	650	660
6	540	550	560	580	590	600	620	630	640	650	670
6	550	560	570	590	600	610	620	640	650	660	680

Grade	Base	1	2	3	4	5	6	7	8	9	10
6	560	570	580	590	610	620	630	640	660	670	680
6	570	580	590	600	610	630	640	650	670	680	690
6	580	580	600	610	620	640	650	660	670	690	700
6	590	590	600	620	630	640	660	670	680	690	710
6	600	600	610	630	640	650	660	680	690	700	720
6	610	610	620	630	650	660	670	690	700	710	720
6	620	620	630	640	650	670	680	690	710	720	730
6	630	630	640	650	660	680	690	700	710	730	740
6	640	640	650	660	670	680	700	710	720	730	750
6	650	650	650	670	680	690	700	720	730	740	760
6	660	660	660	670	690	700	710	730	740	750	760
6	670	670	670	680	700	710	720	730	750	760	770
6	680	680	680	690	700	720	730	740	750	770	780
6	690	690	690	700	710	720	740	750	760	780	790
6	700	700	700	710	720	730	740	760	770	780	800
6	710	710	710	710	730	740	750	770	780	790	800
6	720	720	720	720	740	750	760	770	790	800	810
6	730	730	730	730	740	760	770	780	790	810	820
6	740	740	740	740	750	760	780	790	800	820	830
6	750	750	750	750	760	770	790	800	810	820	840
6	760	760	760	760	770	780	790	810	820	830	840
6	770	770	770	770	780	790	800	810	830	840	850
6	780	780	780	780	780	800	810	820	840	850	860
6	790	790	790	790	790	800	820	830	840	860	870
6	800	800	800	800	800	810	830	840	850	860	880
6	810	810	810	810	810	820	830	850	860	870	890
6	820	820	820	820	820	830	840	850	870	880	890
6	830	830	830	830	830	840	850	860	880	890	900
6	840	840	840	840	840	850	860	870	880	900	910
6	850	850	850	850	850	850	870	880	890	900	920
6	860	860	860	860	860	860	870	890	900	910	930
6	870	870	870	870	870	870	880	900	910	920	930
6	880	880	880	880	880	880	890	900	920	930	940
6	890	890	890	890	890	890	900	910	920	940	950
7	0	130	150	160	170	180	200	210	220	240	250
7	10	140	150	170	180	190	210	220	230	240	260

Grade	Base	1	2	3	4	5	6	7	8	9	10
7	20	150	160	180	190	200	210	230	240	250	270
7	30	160	170	180	200	210	220	230	250	260	270
7	40	170	180	190	200	220	230	240	260	270	280
7	50	170	190	200	210	230	240	250	260	280	290
7	60	180	190	210	220	230	250	260	270	280	300
7	70	190	200	220	230	240	250	270	280	290	310
7	80	200	210	220	240	250	260	280	290	300	310
7	90	210	220	230	240	260	270	280	300	310	320
7	100	210	230	240	250	270	280	290	300	320	330
7	110	220	240	250	260	270	290	300	310	320	340
7	120	230	240	260	270	280	290	310	320	330	350
7	130	240	250	260	280	290	300	320	330	340	350
7	140	250	260	270	280	300	310	320	340	350	360
7	150	250	270	280	290	310	320	330	340	360	370
7	160	260	280	290	300	310	330	340	350	370	380
7	170	270	280	300	310	320	330	350	360	370	390
7	180	280	290	300	320	330	340	360	370	380	390
7	190	290	300	310	330	340	350	360	380	390	400
7	200	290	310	320	330	350	360	370	380	400	410
7	210	300	320	330	340	350	370	380	390	410	420
7	220	310	320	340	350	360	380	390	400	410	430
7	230	320	330	340	360	370	380	400	410	420	430
7	240	330	340	350	370	380	390	400	420	430	440
7	250	340	350	360	370	390	400	410	430	440	450
7	260	340	360	370	380	390	410	420	430	450	460
7	270	350	360	380	390	400	420	430	440	450	470
7	280	360	370	390	400	410	420	440	450	460	480
7	290	370	380	390	410	420	430	440	460	470	480
7	300	380	390	400	410	430	440	450	470	480	490
7	310	380	400	410	420	440	450	460	470	490	500
7	320	390	400	420	430	440	460	470	480	490	510
7	330	400	410	430	440	450	460	480	490	500	520
7	340	410	420	430	450	460	470	480	500	510	520
7	350	420	430	440	450	470	480	490	510	520	530
7	360	420	440	450	460	480	490	500	510	530	540
7	370	430	450	460	470	480	500	510	520	530	550

Grade	Base	1	2	3	4	5	6	7	8	9	10
7	380	440	450	470	480	490	500	520	530	540	560
7	390	450	460	470	490	500	510	530	540	550	560
7	400	460	470	480	500	510	520	530	550	560	570
7	410	460	480	490	500	520	530	540	550	570	580
7	420	470	490	500	510	520	540	550	560	580	590
7	430	480	490	510	520	530	540	560	570	580	600
7	440	490	500	510	530	540	550	570	580	590	600
7	450	500	510	520	540	550	560	570	590	600	610
7	460	500	520	530	540	560	570	580	590	610	620
7	470	510	530	540	550	560	580	590	600	620	630
7	480	520	530	550	560	570	590	600	610	620	640
7	490	530	540	550	570	580	590	610	620	630	640
7	500	540	550	560	580	590	600	610	630	640	650
7	510	550	560	570	580	600	610	620	640	650	660
7	520	550	570	580	590	600	620	630	640	660	670
7	530	560	570	590	600	610	630	640	650	660	680
7	540	570	580	600	610	620	630	650	660	670	690
7	550	580	590	600	620	630	640	650	670	680	690
7	560	590	600	610	620	640	650	660	680	690	700
7	570	590	610	620	630	650	660	670	680	700	710
7	580	600	610	630	640	650	670	680	690	700	720
7	590	610	620	640	650	660	670	690	700	710	730
7	600	620	630	640	660	670	680	700	710	720	730
7	610	630	640	650	660	680	690	700	720	730	740
7	620	630	650	660	670	690	700	710	720	740	750
7	630	640	660	670	680	690	710	720	730	750	760
7	640	650	660	680	690	700	710	730	740	750	770
7	650	660	670	680	700	710	720	740	750	760	770
7	660	670	680	690	710	720	730	740	760	770	780
7	670	670	690	700	710	730	740	750	760	780	790
7	680	680	700	710	720	730	750	760	770	790	800
7	690	690	700	720	730	740	760	770	780	790	810
7	700	700	710	720	740	750	760	780	790	800	810
7	710	710	720	730	750	760	770	780	800	810	820
7	720	720	730	740	750	770	780	790	800	820	830
7	730	730	740	750	760	770	790	800	810	830	840

Grade	Base	1	2	3	4	5	6	7	8	9	10
7	740	740	740	760	770	780	800	810	820	830	850
7	750	750	750	760	780	790	800	820	830	840	850
7	760	760	760	770	790	800	810	820	840	850	860
7	770	770	770	780	790	810	820	830	850	860	870
7	780	780	780	790	800	810	830	840	850	870	880
7	790	790	790	800	810	820	840	850	860	870	890
7	800	800	800	810	820	830	840	860	870	880	900
7	810	810	810	810	830	840	850	860	880	890	900
7	820	820	820	820	830	850	860	870	890	900	910
7	830	830	830	830	840	860	870	880	890	910	920
7	840	840	840	840	850	860	880	890	900	910	930
7	850	850	850	850	860	870	880	900	910	920	940
7	860	860	860	860	870	880	890	910	920	930	940
7	870	870	870	870	870	890	900	910	930	940	950
7	880	880	880	880	880	900	910	920	930	950	960
7	890	890	890	890	890	900	920	930	940	960	970
7	900	900	900	900	900	910	920	940	950	960	980
7	910	910	910	910	910	920	930	950	960	970	980
7	920	920	920	920	920	930	940	950	970	980	990
7	930	930	930	930	930	940	950	960	970	990	1000
7	940	940	940	940	940	940	960	970	980	1000	1010
7	950	950	950	950	950	950	960	980	990	1000	1020
7	960	960	960	960	960	960	970	990	1000	1010	1020
7	970	970	970	970	970	970	980	990	1010	1020	1030
7	980	980	980	980	980	980	990	1000	1010	1030	1040
7	990	990	990	990	990	990	1000	1010	1020	1040	1050
8	0	150	160	180	190	200	220	230	240	250	270
8	10	160	170	190	200	210	220	240	250	260	280
8	20	170	180	190	210	220	230	240	260	270	280
8	30	180	190	200	210	230	240	250	270	280	290
8	40	180	200	210	220	240	250	260	270	290	300
8	50	190	200	220	230	240	260	270	280	290	310
8	60	200	210	230	240	250	260	280	290	300	320
8	70	210	220	230	250	260	270	290	300	310	320
8	80	220	230	240	250	270	280	290	310	320	330
8	90	220	240	250	260	280	290	300	310	330	340

Grade	Base	1	2	3	4	5	6	7	8	9	10
8	100	230	240	260	270	280	300	310	320	330	350
8	110	240	250	270	280	290	300	320	330	340	360
8	120	250	260	270	290	300	310	330	340	350	360
8	130	260	270	280	300	310	320	330	350	360	370
8	140	260	280	290	300	320	330	340	350	370	380
8	150	270	290	300	310	320	340	350	360	380	390
8	160	280	290	310	320	330	340	360	370	380	400
8	170	290	300	310	330	340	350	370	380	390	400
8	180	300	310	320	340	350	360	370	390	400	410
8	190	300	320	330	340	360	370	380	390	410	420
8	200	310	330	340	350	360	380	390	400	420	430
8	210	320	330	350	360	370	390	400	410	420	440
8	220	330	340	350	370	380	390	410	420	430	440
8	230	340	350	360	380	390	400	410	430	440	450
8	240	350	360	370	380	400	410	420	440	450	460
8	250	350	370	380	390	400	420	430	440	460	470
8	260	360	370	390	400	410	430	440	450	460	480
8	270	370	380	400	410	420	430	450	460	470	490
8	280	380	390	400	420	430	440	450	470	480	490
8	290	390	400	410	420	440	450	460	480	490	500
8	300	390	410	420	430	450	460	470	480	500	510
8	310	400	410	430	440	450	470	480	490	500	520
8	320	410	420	440	450	460	470	490	500	510	530
8	330	420	430	440	460	470	480	500	510	520	530
8	340	430	440	450	460	480	490	500	520	530	540
8	350	430	450	460	470	490	500	510	520	540	550
8	360	440	460	470	480	490	510	520	530	540	560
8	370	450	460	480	490	500	510	530	540	550	570
8	380	460	470	480	500	510	520	540	550	560	570
8	390	470	480	490	500	520	530	540	560	570	580
8	400	470	490	500	510	530	540	550	560	580	590
8	410	480	500	510	520	530	550	560	570	590	600
8	420	490	500	520	530	540	550	570	580	590	610
8	430	500	510	520	540	550	560	580	590	600	610
8	440	510	520	530	550	560	570	580	600	610	620
8	450	510	530	540	550	570	580	590	600	620	630

Grade	Base	1	2	3	4	5	6	7	8	9	10
8	460	520	540	550	560	570	590	600	610	630	640
8	470	530	540	560	570	580	600	610	620	630	650
8	480	540	550	560	580	590	600	620	630	640	650
8	490	550	560	570	590	600	610	620	640	650	660
8	500	560	570	580	590	610	620	630	650	660	670
8	510	560	580	590	600	610	630	640	650	670	680
8	520	570	580	600	610	620	640	650	660	670	690
8	530	580	590	610	620	630	640	660	670	680	700
8	540	590	600	610	630	640	650	660	680	690	700
8	550	600	610	620	630	650	660	670	690	700	710
8	560	600	620	630	640	660	670	680	690	710	720
8	570	610	620	640	650	660	680	690	700	710	730
8	580	620	630	650	660	670	680	700	710	720	740
8	590	630	640	650	670	680	690	710	720	730	740
8	600	640	650	660	670	690	700	710	730	740	750
8	610	640	660	670	680	700	710	720	730	750	760
8	620	650	670	680	690	700	720	730	740	760	770
8	630	660	670	690	700	710	720	740	750	760	780
8	640	670	680	690	710	720	730	750	760	770	780
8	650	680	690	700	720	730	740	750	770	780	790
8	660	680	700	710	720	740	750	760	770	790	800
8	670	690	710	720	730	740	760	770	780	800	810
8	680	700	710	730	740	750	770	780	790	800	820
8	690	710	720	730	750	760	770	790	800	810	820
8	700	720	730	740	760	770	780	790	810	820	830
8	710	720	740	750	760	780	790	800	810	830	840
8	720	730	750	760	770	780	800	810	820	840	850
8	730	740	750	770	780	790	810	820	830	840	860
8	740	750	760	780	790	800	810	830	840	850	860
8	750	760	770	780	800	810	820	830	850	860	870
8	760	770	780	790	800	820	830	840	860	870	880
8	770	770	790	800	810	820	840	850	860	880	890
8	780	780	790	810	820	830	850	860	870	880	900
8	790	790	800	820	830	840	850	870	880	890	910
8	800	800	810	820	840	850	860	870	890	900	910
8	810	810	820	830	840	860	870	880	900	910	920

Grade	Base	1	2	3	4	5	6	7	8	9	10
8	820	820	830	840	850	870	880	890	900	920	930
8	830	830	830	850	860	870	890	900	910	920	940
8	840	840	840	860	870	880	890	910	920	930	950
8	850	850	850	860	880	890	900	920	930	940	950
8	860	860	860	870	880	900	910	920	940	950	960
8	870	870	870	880	890	910	920	930	940	960	970
8	880	880	880	890	900	910	930	940	950	970	980
8	890	890	890	900	910	920	930	950	960	970	990
8	900	900	900	900	920	930	940	960	970	980	990
8	910	910	910	910	930	940	950	960	980	990	1000
8	920	920	920	920	930	950	960	970	980	1000	1010
8	930	930	930	930	940	950	970	980	990	1010	1020
8	940	940	940	940	950	960	980	990	1000	1010	1030
8	950	950	950	950	960	970	980	1000	1010	1020	1030
8	960	960	960	960	970	980	990	1000	1020	1030	1040
8	970	970	970	970	970	990	1000	1010	1020	1040	1050
8	980	980	980	980	980	990	1010	1020	1030	1050	1060
8	990	990	990	990	990	1000	1020	1030	1040	1050	1070
8	1000	1000	1000	1000	1000	1010	1020	1040	1050	1060	1070
8	1010	1010	1010	1010	1010	1020	1030	1040	1060	1070	1080
8	1020	1020	1020	1020	1020	1030	1040	1050	1070	1080	1090
8	1030	1030	1030	1030	1030	1030	1050	1060	1070	1090	1100
8	1040	1040	1040	1040	1040	1040	1060	1070	1080	1090	1110
8	1050	1050	1050	1050	1050	1050	1060	1080	1090	1100	1120
8	1060	1060	1060	1060	1060	1060	1070	1080	1100	1110	1120
8	1070	1070	1070	1070	1070	1070	1080	1090	1110	1120	1130
8	1080	1080	1080	1080	1080	1080	1090	1100	1110	1130	1140
8	1090	1090	1090	1090	1090	1090	1100	1110	1120	1130	1150
9	0	170	180	200	210	220	230	250	260	270	290
9	10	180	190	200	220	230	240	250	270	280	290
9	20	190	200	210	220	240	250	260	280	290	300
9	30	190	210	220	230	250	260	270	280	300	310
9	40	200	210	230	240	250	270	280	290	300	320
9	50	210	220	240	250	260	270	290	300	310	330
9	60	220	230	240	260	270	280	300	310	320	330
9	70	230	240	250	260	280	290	300	320	330	340

Grade	Base	1	2	3	4	5	6	7	8	9	10
9	80	230	250	260	270	290	300	310	320	340	350
9	90	240	260	270	280	290	310	320	330	340	360
9	100	250	260	280	290	300	310	330	340	350	370
9	110	260	270	280	300	310	320	340	350	360	370
9	120	270	280	290	300	320	330	340	360	370	380
9	130	270	290	300	310	330	340	350	360	380	390
9	140	280	300	310	320	330	350	360	370	390	400
9	150	290	300	320	330	340	350	370	380	390	410
9	160	300	310	320	340	350	360	380	390	400	410
9	170	310	320	330	350	360	370	380	400	410	420
9	180	310	330	340	350	370	380	390	400	420	430
9	190	320	340	350	360	370	390	400	410	430	440
9	200	330	340	360	370	380	400	410	420	430	450
9	210	340	350	360	380	390	400	420	430	440	450
9	220	350	360	370	390	400	410	420	440	450	460
9	230	360	370	380	390	410	420	430	450	460	470
9	240	360	380	390	400	410	430	440	450	470	480
9	250	370	380	400	410	420	440	450	460	470	490
9	260	380	390	410	420	430	440	460	470	480	500
9	270	390	400	410	430	440	450	460	480	490	500
9	280	400	410	420	430	450	460	470	490	500	510
9	290	400	420	430	440	460	470	480	490	510	520
9	300	410	420	440	450	460	480	490	500	510	530
9	310	420	430	450	460	470	480	500	510	520	540
9	320	430	440	450	470	480	490	510	520	530	540
9	330	440	450	460	470	490	500	510	530	540	550
9	340	440	460	470	480	500	510	520	530	550	560
9	350	450	470	480	490	500	520	530	540	550	570
9	360	460	470	490	500	510	520	540	550	560	580
9	370	470	480	490	510	520	530	550	560	570	580
9	380	480	490	500	520	530	540	550	570	580	590
9	390	480	500	510	520	540	550	560	570	590	600
9	400	490	510	520	530	540	560	570	580	600	610
9	410	500	510	530	540	550	560	580	590	600	620
9	420	510	520	530	550	560	570	590	600	610	620
9	430	520	530	540	560	570	580	590	610	620	630

Grade	Base	1	2	3	4	5	6	7	8	9	10
9	440	520	540	550	560	580	590	600	610	630	640
9	450	530	550	560	570	580	600	610	620	640	650
9	460	540	550	570	580	590	610	620	630	640	660
9	470	550	560	570	590	600	610	630	640	650	660
9	480	560	570	580	600	610	620	630	650	660	670
9	490	570	580	590	600	620	630	640	660	670	680
9	500	570	590	600	610	620	640	650	660	680	690
9	510	580	590	610	620	630	650	660	670	680	700
9	520	590	600	620	630	640	650	670	680	690	710
9	530	600	610	620	640	650	660	670	690	700	710
9	540	610	620	630	640	660	670	680	700	710	720
9	550	610	630	640	650	670	680	690	700	720	730
9	560	620	630	650	660	670	690	700	710	720	740
9	570	630	640	660	670	680	690	710	720	730	750
9	580	640	650	660	680	690	700	720	730	740	750
9	590	650	660	670	680	700	710	720	740	750	760
9	600	650	670	680	690	710	720	730	740	760	770
9	610	660	680	690	700	710	730	740	750	770	780
9	620	670	680	700	710	720	730	750	760	770	790
9	630	680	690	700	720	730	740	760	770	780	790
9	640	690	700	710	730	740	750	760	780	790	800
9	650	690	710	720	730	750	760	770	780	800	810
9	660	700	720	730	740	750	770	780	790	810	820
9	670	710	720	740	750	760	780	790	800	810	830
9	680	720	730	740	760	770	780	800	810	820	830
9	690	730	740	750	770	780	790	800	820	830	840
9	700	740	750	760	770	790	800	810	820	840	850
9	710	740	760	770	780	790	810	820	830	850	860
9	720	750	760	780	790	800	820	830	840	850	870
9	730	760	770	780	800	810	820	840	850	860	870
9	740	770	780	790	810	820	830	840	860	870	880
9	750	780	790	800	810	830	840	850	870	880	890
9	760	780	800	810	820	830	850	860	870	890	900
9	770	790	800	820	830	840	860	870	880	890	910
9	780	800	810	830	840	850	860	880	890	900	920
9	790	810	820	830	850	860	870	880	900	910	920

Grade	Base	1	2	3	4	5	6	7	8	9	10
9	800	820	830	840	850	870	880	890	910	920	930
9	810	820	840	850	860	880	890	900	910	930	940
9	820	830	840	860	870	880	900	910	920	930	950
9	830	840	850	870	880	890	900	920	930	940	960
9	840	850	860	870	890	900	910	930	940	950	960
9	850	860	870	880	890	910	920	930	950	960	970
9	860	860	880	890	900	920	930	940	950	970	980
9	870	870	890	900	910	920	940	950	960	980	990
9	880	880	890	910	920	930	940	960	970	980	1000
9	890	890	900	910	930	940	950	970	980	990	1000
9	900	900	910	920	940	950	960	970	990	1000	1010
9	910	910	920	930	940	960	970	980	990	1010	1020
9	920	920	930	940	950	960	980	990	1000	1020	1030
9	930	930	930	950	960	970	990	1000	1010	1020	1040
9	940	940	940	950	970	980	990	1010	1020	1030	1040
9	950	950	950	960	980	990	1000	1010	1030	1040	1050
9	960	960	960	970	980	1000	1010	1020	1040	1050	1060
9	970	970	970	980	990	1000	1020	1030	1040	1060	1070
9	980	980	980	990	1000	1010	1030	1040	1050	1060	1080
9	990	990	990	1000	1010	1020	1030	1050	1060	1070	1080
9	1000	1000	1000	1000	1020	1030	1040	1050	1070	1080	1090
9	1010	1010	1010	1010	1020	1040	1050	1060	1080	1090	1100
9	1020	1020	1020	1020	1030	1040	1060	1070	1080	1100	1110
9	1030	1030	1030	1030	1040	1050	1070	1080	1090	1100	1120
9	1040	1040	1040	1040	1050	1060	1070	1090	1100	1110	1130
9	1050	1050	1050	1050	1060	1070	1080	1090	1110	1120	1130
9	1060	1060	1060	1060	1060	1080	1090	1100	1120	1130	1140
9	1070	1070	1070	1070	1070	1090	1100	1110	1120	1140	1150
9	1080	1080	1080	1080	1080	1090	1110	1120	1130	1140	1160
9	1090	1090	1090	1090	1090	1100	1110	1130	1140	1150	1170
9	1100	1100	1100	1100	1100	1110	1120	1140	1150	1160	1170
9	1110	1110	1110	1110	1110	1120	1130	1140	1160	1170	1180
9	1120	1120	1120	1120	1120	1130	1140	1150	1160	1180	1190
9	1130	1130	1130	1130	1130	1130	1150	1160	1170	1190	1200
9	1140	1140	1140	1140	1140	1140	1150	1170	1180	1190	1200
9	1150	1150	1150	1150	1150	1150	1160	1180	1190	1200	1200

Grade	Base	1	2	3	4	5	6	7	8	9	10
9	1160	1160	1160	1160	1160	1160	1170	1180	1200	1200	1200
9	1170	1170	1170	1170	1170	1170	1180	1190	1200	1200	1200
9	1180	1180	1180	1180	1180	1180	1190	1200	1200	1200	1200
9	1190	1190	1190	1190	1190	1190	1200	1200	1200	1200	1200
10	0	190	200	210	230	240	250	260	280	290	300
10	10	200	210	220	230	250	260	270	290	300	310
10	20	200	220	230	240	260	270	280	290	310	320
10	30	210	220	240	250	260	280	290	300	310	330
10	40	220	230	250	260	270	280	300	310	320	340
10	50	230	240	250	270	280	290	310	320	330	340
10	60	240	250	260	270	290	300	310	330	340	350
10	70	240	260	270	280	300	310	320	330	350	360
10	80	250	260	280	290	300	320	330	340	350	370
10	90	260	270	290	300	310	320	340	350	360	380
10	100	270	280	290	310	320	330	350	360	370	380
10	110	280	290	300	320	330	340	350	370	380	390
10	120	280	300	310	320	340	350	360	370	390	400
10	130	290	310	320	330	340	360	370	380	400	410
10	140	300	310	330	340	350	360	380	390	400	420
10	150	310	320	330	350	360	370	390	400	410	420
10	160	320	330	340	360	370	380	390	410	420	430
10	170	320	340	350	360	380	390	400	410	430	440
10	180	330	350	360	370	380	400	410	420	440	450
10	190	340	350	370	380	390	410	420	430	440	460
10	200	350	360	370	390	400	410	430	440	450	460
10	210	360	370	380	400	410	420	430	450	460	470
10	220	370	380	390	400	420	430	440	460	470	480
10	230	370	390	400	410	420	440	450	460	480	490
10	240	380	390	410	420	430	450	460	470	480	500
10	250	390	400	420	430	440	450	470	480	490	510
10	260	400	410	420	440	450	460	470	490	500	510
10	270	410	420	430	440	460	470	480	500	510	520
10	280	410	430	440	450	470	480	490	500	520	530
10	290	420	430	450	460	470	490	500	510	520	540
10	300	430	440	460	470	480	490	510	520	530	550
10	310	440	450	460	480	490	500	520	530	540	550

Grade	Base	1	2	3	4	5	6	7	8	9	10
10	320	450	460	470	480	500	510	520	540	550	560
10	330	450	470	480	490	510	520	530	540	560	570
10	340	460	480	490	500	510	530	540	550	570	580
10	350	470	480	500	510	520	530	550	560	570	590
10	360	480	490	500	520	530	540	560	570	580	590
10	370	490	500	510	520	540	550	560	580	590	600
10	380	490	510	520	530	550	560	570	580	600	610
10	390	500	520	530	540	550	570	580	590	610	620
10	400	510	520	540	550	560	570	590	600	610	630
10	410	520	530	540	560	570	580	600	610	620	630
10	420	530	540	550	570	580	590	600	620	630	640
10	430	530	550	560	570	590	600	610	620	640	650
10	440	540	560	570	580	590	610	620	630	650	660
10	450	550	560	580	590	600	620	630	640	650	670
10	460	560	570	580	600	610	620	640	650	660	670
10	470	570	580	590	610	620	630	640	660	670	680
10	480	580	590	600	610	630	640	650	670	680	690
10	490	580	600	610	620	630	650	660	670	690	700
10	500	590	600	620	630	640	660	670	680	690	710
10	510	600	610	630	640	650	660	680	690	700	720
10	520	610	620	630	650	660	670	680	700	710	720
10	530	620	630	640	650	670	680	690	710	720	730
10	540	620	640	650	660	680	690	700	710	730	740
10	550	630	640	660	670	680	700	710	720	730	750
10	560	640	650	670	680	690	700	720	730	740	760
10	570	650	660	670	690	700	710	730	740	750	760
10	580	660	670	680	690	710	720	730	750	760	770
10	590	660	680	690	700	720	730	740	750	770	780
10	600	670	690	700	710	720	740	750	760	780	790
10	610	680	690	710	720	730	740	760	770	780	800
10	620	690	700	710	730	740	750	770	780	790	800
10	630	700	710	720	740	750	760	770	790	800	810
10	640	700	720	730	740	760	770	780	790	810	820
10	650	710	730	740	750	760	780	790	800	820	830
10	660	720	730	750	760	770	780	800	810	820	840
10	670	730	740	750	770	780	790	810	820	830	840

Grade	Base	1	2	3	4	5	6	7	8	9	10
10	680	740	750	760	780	790	800	810	830	840	850
10	690	740	760	770	780	800	810	820	830	850	860
10	700	750	770	780	790	800	820	830	840	860	870
10	710	760	770	790	800	810	830	840	850	860	880
10	720	770	780	800	810	820	830	850	860	870	880
10	730	780	790	800	820	830	840	850	870	880	890
10	740	790	800	810	820	840	850	860	880	890	900
10	750	790	810	820	830	840	860	870	880	900	910
10	760	800	810	830	840	850	870	880	890	900	920
10	770	810	820	840	850	860	870	890	900	910	930
10	780	820	830	840	860	870	880	890	910	920	930
10	790	830	840	850	860	880	890	900	920	930	940
10	800	830	850	860	870	890	900	910	920	940	950
10	810	840	850	870	880	890	910	920	930	940	960
10	820	850	860	880	890	900	910	930	940	950	970
10	830	860	870	880	900	910	920	940	950	960	970
10	840	870	880	890	900	920	930	940	960	970	980
10	850	870	890	900	910	930	940	950	960	980	990
10	860	880	900	910	920	930	950	960	970	990	1000
10	870	890	900	920	930	940	950	970	980	990	1010
10	880	900	910	920	940	950	960	980	990	1000	1010
10	890	910	920	930	950	960	970	980	1000	1010	1020
10	900	910	930	940	950	970	980	990	1000	1020	1030
10	910	920	940	950	960	970	990	1000	1010	1030	1040
10	920	930	940	960	970	980	1000	1010	1020	1030	1050
10	930	940	950	960	980	990	1000	1020	1030	1040	1050
10	940	950	960	970	990	1000	1010	1020	1040	1050	1060
10	950	960	970	980	990	1010	1020	1030	1050	1060	1070
10	960	960	980	990	1000	1010	1030	1040	1050	1070	1080
10	970	970	980	1000	1010	1020	1040	1050	1060	1070	1090
10	980	980	990	1000	1020	1030	1040	1060	1070	1080	1090
10	990	990	1000	1010	1030	1040	1050	1060	1080	1090	1100
10	1000	1000	1010	1020	1030	1050	1060	1070	1090	1100	1110
10	1010	1010	1020	1030	1040	1060	1070	1080	1090	1110	1120
10	1020	1020	1020	1040	1050	1060	1080	1090	1100	1110	1130
10	1030	1030	1030	1050	1060	1070	1080	1100	1110	1120	1140

Grade	Base	1	2	3	4	5	6	7	8	9	10
10	1040	1040	1040	1050	1070	1080	1090	1100	1120	1130	1140
10	1050	1050	1050	1060	1070	1090	1100	1110	1130	1140	1150
10	1060	1060	1060	1070	1080	1100	1110	1120	1130	1150	1160
10	1070	1070	1070	1080	1090	1100	1120	1130	1140	1150	1170
10	1080	1080	1080	1090	1100	1110	1120	1140	1150	1160	1180
10	1090	1090	1090	1090	1110	1120	1130	1150	1160	1170	1180
10	1100	1100	1100	1100	1110	1130	1140	1150	1170	1180	1190
10	1110	1110	1110	1110	1120	1140	1150	1160	1170	1190	1200
10	1120	1120	1120	1120	1130	1140	1160	1170	1180	1200	1200
10	1130	1130	1130	1130	1140	1150	1160	1180	1190	1200	1200
10	1140	1140	1140	1140	1150	1160	1170	1190	1200	1200	1200
10	1150	1150	1150	1150	1160	1170	1180	1190	1200	1200	1200
10	1160	1160	1160	1160	1160	1180	1190	1200	1200	1200	1200
10	1170	1170	1170	1170	1170	1180	1200	1200	1200	1200	1200
10	1180	1180	1180	1180	1180	1190	1200	1200	1200	1200	1200
10	1190	1190	1190	1190	1190	1200	1200	1200	1200	1200	1200
10	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
11	0	210	220	230	240	260	270	280	300	310	320
11	10	210	230	240	250	270	280	290	300	320	330
11	20	220	230	250	260	270	290	300	310	320	340
11	30	230	240	260	270	280	290	310	320	330	350
11	40	240	250	260	280	290	300	320	330	340	350
11	50	250	260	270	280	300	310	320	340	350	360
11	60	250	270	280	290	310	320	330	340	360	370
11	70	260	280	290	300	310	330	340	350	360	380
11	80	270	280	300	310	320	330	350	360	370	390
11	90	280	290	300	320	330	340	360	370	380	390
11	100	290	300	310	320	340	350	360	380	390	400
11	110	290	310	320	330	350	360	370	380	400	410
11	120	300	320	330	340	350	370	380	390	410	420
11	130	310	320	340	350	360	380	390	400	410	430
11	140	320	330	340	360	370	380	400	410	420	430
11	150	330	340	350	370	380	390	400	420	430	440
11	160	340	350	360	370	390	400	410	420	440	450
11	170	340	360	370	380	390	410	420	430	450	460
11	180	350	360	380	390	400	420	430	440	450	470

Grade	Base	1	2	3	4	5	6	7	8	9	10
11	190	360	370	380	400	410	420	440	450	460	470
11	200	370	380	390	410	420	430	440	460	470	480
11	210	380	390	400	410	430	440	450	470	480	490
11	220	380	400	410	420	430	450	460	470	490	500
11	230	390	400	420	430	440	460	470	480	490	510
11	240	400	410	430	440	450	460	480	490	500	520
11	250	410	420	430	450	460	470	480	500	510	520
11	260	420	430	440	450	470	480	490	510	520	530
11	270	420	440	450	460	480	490	500	510	530	540
11	280	430	440	460	470	480	500	510	520	530	550
11	290	440	450	470	480	490	500	520	530	540	560
11	300	450	460	470	490	500	510	530	540	550	560
11	310	460	470	480	490	510	520	530	550	560	570
11	320	460	480	490	500	520	530	540	550	570	580
11	330	470	490	500	510	520	540	550	560	580	590
11	340	480	490	510	520	530	540	560	570	580	600
11	350	490	500	510	530	540	550	570	580	590	600
11	360	500	510	520	540	550	560	570	590	600	610
11	370	500	520	530	540	560	570	580	590	610	620
11	380	510	530	540	550	560	580	590	600	620	630
11	390	520	530	550	560	570	580	600	610	620	640
11	400	530	540	550	570	580	590	610	620	630	640
11	410	540	550	560	580	590	600	610	630	640	650
11	420	540	560	570	580	600	610	620	630	650	660
11	430	550	570	580	590	600	620	630	640	660	670
11	440	560	570	590	600	610	630	640	650	660	680
11	450	570	580	590	610	620	630	650	660	670	680
11	460	580	590	600	620	630	640	650	670	680	690
11	470	590	600	610	620	640	650	660	680	690	700
11	480	590	610	620	630	640	660	670	680	700	710
11	490	600	610	630	640	650	670	680	690	700	720
11	500	610	620	640	650	660	670	690	700	710	730
11	510	620	630	640	660	670	680	690	710	720	730
11	520	630	640	650	660	680	690	700	720	730	740
11	530	630	650	660	670	690	700	710	720	740	750
11	540	640	650	670	680	690	710	720	730	740	760

Grade	Base	1	2	3	4	5	6	7	8	9	10
11	550	650	660	680	690	700	710	730	740	750	770
11	560	660	670	680	700	710	720	740	750	760	770
11	570	670	680	690	700	720	730	740	760	770	780
11	580	670	690	700	710	730	740	750	760	780	790
11	590	680	700	710	720	730	750	760	770	790	800
11	600	690	700	720	730	740	750	770	780	790	810
11	610	700	710	720	740	750	760	780	790	800	810
11	620	710	720	730	750	760	770	780	800	810	820
11	630	710	730	740	750	770	780	790	800	820	830
11	640	720	740	750	760	770	790	800	810	830	840
11	650	730	740	760	770	780	800	810	820	830	850
11	660	740	750	760	780	790	800	820	830	840	850
11	670	750	760	770	790	800	810	820	840	850	860
11	680	760	770	780	790	810	820	830	840	860	870
11	690	760	780	790	800	810	830	840	850	870	880
11	700	770	780	800	810	820	840	850	860	870	890
11	710	780	790	800	820	830	840	860	870	880	890
11	720	790	800	810	830	840	850	860	880	890	900
11	730	800	810	820	830	850	860	870	890	900	910
11	740	800	820	830	840	850	870	880	890	910	920
11	750	810	820	840	850	860	880	890	900	910	930
11	760	820	830	850	860	870	880	900	910	920	940
11	770	830	840	850	870	880	890	900	920	930	940
11	780	840	850	860	870	890	900	910	930	940	950
11	790	840	860	870	880	900	910	920	930	950	960
11	800	850	860	880	890	900	920	930	940	950	970
11	810	860	870	890	900	910	920	940	950	960	980
11	820	870	880	890	910	920	930	950	960	970	980
11	830	880	890	900	910	930	940	950	970	980	990
11	840	880	900	910	920	940	950	960	970	990	1000
11	850	890	910	920	930	940	960	970	980	1000	1010
11	860	900	910	930	940	950	960	980	990	1000	1020
11	870	910	920	930	950	960	970	990	1000	1010	1020
11	880	920	930	940	960	970	980	990	1010	1020	1030
11	890	920	940	950	960	980	990	1000	1010	1030	1040
11	900	930	950	960	970	980	1000	1010	1020	1040	1050

Grade	Base	1	2	3	4	5	6	7	8	9	10
11	910	940	950	970	980	990	1010	1020	1030	1040	1060
11	920	950	960	970	990	1000	1010	1030	1040	1050	1060
11	930	960	970	980	1000	1010	1020	1030	1050	1060	1070
11	940	970	980	990	1000	1020	1030	1040	1060	1070	1080
11	950	970	990	1000	1010	1020	1040	1050	1060	1080	1090
11	960	980	990	1010	1020	1030	1050	1060	1070	1080	1100
11	970	990	1000	1020	1030	1040	1050	1070	1080	1090	1100
11	980	1000	1010	1020	1040	1050	1060	1070	1090	1100	1110
11	990	1010	1020	1030	1040	1060	1070	1080	1100	1110	1120
11	1000	1010	1030	1040	1050	1060	1080	1090	1100	1120	1130
11	1010	1020	1030	1050	1060	1070	1090	1100	1110	1120	1140
11	1020	1030	1040	1060	1070	1080	1090	1110	1120	1130	1150
11	1030	1040	1050	1060	1080	1090	1100	1110	1130	1140	1150
11	1040	1050	1060	1070	1080	1100	1110	1120	1140	1150	1160
11	1050	1050	1070	1080	1090	1110	1120	1130	1140	1160	1170
11	1060	1060	1080	1090	1100	1110	1130	1140	1150	1160	1180
11	1070	1070	1080	1100	1110	1120	1130	1150	1160	1170	1190
11	1080	1080	1090	1100	1120	1130	1140	1160	1170	1180	1190
11	1090	1090	1100	1110	1120	1140	1150	1160	1180	1190	1200
11	1100	1100	1110	1120	1130	1150	1160	1170	1180	1200	1200
11	1110	1110	1120	1130	1140	1150	1170	1180	1190	1200	1200
11	1120	1120	1120	1140	1150	1160	1170	1190	1200	1200	1200
11	1130	1130	1130	1140	1160	1170	1180	1200	1200	1200	1200
11	1140	1140	1140	1150	1170	1180	1190	1200	1200	1200	1200
11	1150	1150	1150	1160	1170	1190	1200	1200	1200	1200	1200
11	1160	1160	1160	1170	1180	1190	1200	1200	1200	1200	1200
11	1170	1170	1170	1180	1190	1200	1200	1200	1200	1200	1200
11	1180	1180	1180	1180	1200	1200	1200	1200	1200	1200	1200
11	1190	1190	1190	1190	1200	1200	1200	1200	1200	1200	1200
11	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
12	0	220	240	250	260	280	290	300	310	330	340
12	10	230	240	260	270	280	300	310	320	330	350
12	20	240	250	270	280	290	300	320	330	340	360
12	30	250	260	270	290	300	310	330	340	350	360
12	40	260	270	280	290	310	320	330	350	360	370
12	50	260	280	290	300	320	330	340	350	370	380

Grade	Base	1	2	3	4	5	6	7	8	9	10
12	60	270	280	300	310	320	340	350	360	380	390
12	70	280	290	310	320	330	340	360	370	380	400
12	80	290	300	310	330	340	350	370	380	390	400
12	90	300	310	320	340	350	360	370	390	400	410
12	100	300	320	330	340	360	370	380	390	410	420
12	110	310	330	340	350	360	380	390	400	420	430
12	120	320	330	350	360	370	380	400	410	420	440
12	130	330	340	350	370	380	390	410	420	430	440
12	140	340	350	360	380	390	400	410	430	440	450
12	150	340	360	370	380	400	410	420	430	450	460
12	160	350	370	380	390	400	420	430	440	460	470
12	170	360	370	390	400	410	430	440	450	460	480
12	180	370	380	390	410	420	430	450	460	470	480
12	190	380	390	400	420	430	440	450	470	480	490
12	200	390	400	410	420	440	450	460	480	490	500
12	210	390	410	420	430	440	460	470	480	500	510
12	220	400	410	430	440	450	470	480	490	500	520
12	230	410	420	440	450	460	470	490	500	510	530
12	240	420	430	440	460	470	480	490	510	520	530
12	250	430	440	450	460	480	490	500	520	530	540
12	260	430	450	460	470	490	500	510	520	540	550
12	270	440	450	470	480	490	510	520	530	540	560
12	280	450	460	480	490	500	510	530	540	550	570
12	290	460	470	480	500	510	520	540	550	560	570
12	300	470	480	490	500	520	530	540	560	570	580
12	310	470	490	500	510	530	540	550	560	580	590
12	320	480	500	510	520	530	550	560	570	590	600
12	330	490	500	520	530	540	550	570	580	590	610
12	340	500	510	520	540	550	560	580	590	600	610
12	350	510	520	530	540	560	570	580	600	610	620
12	360	510	530	540	550	570	580	590	600	620	630
12	370	520	540	550	560	570	590	600	610	630	640
12	380	530	540	560	570	580	600	610	620	630	650
12	390	540	550	560	580	590	600	620	630	640	650
12	400	550	560	570	590	600	610	620	640	650	660
12	410	550	570	580	590	610	620	630	640	660	670

Grade	Base	1	2	3	4	5	6	7	8	9	10
12	420	560	580	590	600	610	630	640	650	670	680
12	430	570	580	600	610	620	640	650	660	670	690
12	440	580	590	600	620	630	640	660	670	680	690
12	450	590	600	610	630	640	650	660	680	690	700
12	460	600	610	620	630	650	660	670	690	700	710
12	470	600	620	630	640	650	670	680	690	710	720
12	480	610	620	640	650	660	680	690	700	710	730
12	490	620	630	650	660	670	680	700	710	720	740
12	500	630	640	650	670	680	690	700	720	730	740
12	510	640	650	660	670	690	700	710	730	740	750
12	520	640	660	670	680	700	710	720	730	750	760
12	530	650	660	680	690	700	720	730	740	750	770
12	540	660	670	690	700	710	720	740	750	760	780
12	550	670	680	690	710	720	730	750	760	770	780
12	560	680	690	700	710	730	740	750	770	780	790
12	570	680	700	710	720	740	750	760	770	790	800
12	580	690	710	720	730	740	760	770	780	800	810
12	590	700	710	730	740	750	760	780	790	800	820
12	600	710	720	730	750	760	770	790	800	810	820
12	610	720	730	740	760	770	780	790	810	820	830
12	620	720	740	750	760	780	790	800	810	830	840
12	630	730	750	760	770	780	800	810	820	840	850
12	640	740	750	770	780	790	800	820	830	840	860
12	650	750	760	770	790	800	810	830	840	850	860
12	660	760	770	780	800	810	820	830	850	860	870
12	670	760	780	790	800	820	830	840	850	870	880
12	680	770	790	800	810	820	840	850	860	880	890
12	690	780	790	810	820	830	850	860	870	880	900
12	700	790	800	810	830	840	850	870	880	890	900
12	710	800	810	820	840	850	860	870	890	900	910
12	720	810	820	830	840	860	870	880	900	910	920
12	730	810	830	840	850	860	880	890	900	920	930
12	740	820	830	850	860	870	890	900	910	920	940
12	750	830	840	860	870	880	890	910	920	930	950
12	760	840	850	860	880	890	900	910	930	940	950
12	770	850	860	870	880	900	910	920	940	950	960

Grade	Base	1	2	3	4	5	6	7	8	9	10
12	780	850	870	880	890	910	920	930	940	960	970
12	790	860	870	890	900	910	930	940	950	960	980
12	800	870	880	900	910	920	930	950	960	970	990
12	810	880	890	900	920	930	940	960	970	980	990
12	820	890	900	910	920	940	950	960	980	990	1000
12	830	890	910	920	930	950	960	970	980	1000	1010
12	840	900	920	930	940	950	970	980	990	1010	1020
12	850	910	920	940	950	960	970	990	1000	1010	1030
12	860	920	930	940	960	970	980	1000	1010	1020	1030
12	870	930	940	950	970	980	990	1000	1020	1030	1040
12	880	930	950	960	970	990	1000	1010	1020	1040	1050
12	890	940	960	970	980	990	1010	1020	1030	1050	1060
12	900	950	960	980	990	1000	1020	1030	1040	1050	1070
12	910	960	970	980	1000	1010	1020	1040	1050	1060	1070
12	920	970	980	990	1010	1020	1030	1040	1060	1070	1080
12	930	980	990	1000	1010	1030	1040	1050	1070	1080	1090
12	940	980	1000	1010	1020	1030	1050	1060	1070	1090	1100
12	950	990	1000	1020	1030	1040	1060	1070	1080	1090	1110
12	960	1000	1010	1030	1040	1050	1060	1080	1090	1100	1120
12	970	1010	1020	1030	1050	1060	1070	1080	1100	1110	1120
12	980	1020	1030	1040	1050	1070	1080	1090	1110	1120	1130
12	990	1020	1040	1050	1060	1080	1090	1100	1110	1130	1140
12	1000	1030	1040	1060	1070	1080	1100	1110	1120	1130	1150
12	1010	1040	1050	1070	1080	1090	1100	1120	1130	1140	1160
12	1020	1050	1060	1070	1090	1100	1110	1120	1140	1150	1160
12	1030	1060	1070	1080	1090	1110	1120	1130	1150	1160	1170
12	1040	1060	1080	1090	1100	1120	1130	1140	1150	1170	1180
12	1050	1070	1080	1100	1110	1120	1140	1150	1160	1170	1190
12	1060	1080	1090	1110	1120	1130	1140	1160	1170	1180	1200
12	1070	1090	1100	1110	1130	1140	1150	1170	1180	1190	1200
12	1080	1100	1110	1120	1130	1150	1160	1170	1190	1200	1200
12	1090	1100	1120	1130	1140	1160	1170	1180	1190	1200	1200
12	1100	1110	1130	1140	1150	1160	1180	1190	1200	1200	1200
12	1110	1120	1130	1150	1160	1170	1180	1200	1200	1200	1200
12	1120	1130	1140	1150	1170	1180	1190	1200	1200	1200	1200
12	1130	1140	1150	1160	1180	1190	1200	1200	1200	1200	1200

Grade	Base	1	2	3	4	5	6	7	8	9	10
12	1140	1140	1160	1170	1180	1200	1200	1200	1200	1200	1200
12	1150	1150	1170	1180	1190	1200	1200	1200	1200	1200	1200
12	1160	1160	1170	1190	1200	1200	1200	1200	1200	1200	1200
12	1170	1170	1180	1190	1200	1200	1200	1200	1200	1200	1200
12	1180	1180	1190	1200	1200	1200	1200	1200	1200	1200	1200
12	1190	1190	1200	1200	1200	1200	1200	1200	1200	1200	1200
12	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200