The following pages include the answer key for all machine-scored items, followed by the rubrics for the hand-scored items.

- The rubrics show sample student responses. Other valid methods for solving the problem can earn full credit unless a specific method is required by the item.

- In items where the scores are awarded for full and partial credit, the definition of partial credit will be confirmed during range-finding (reviewing sets of real student work).

- If students make a computation error, they can still earn points for reasoning or modeling.
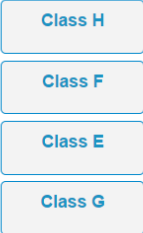
Unit 1

Item Number	Answer Key	Evidence Statement Key/Content Scope
1.	**B, D**	7.NS.1c-1
2.	**34.65**	7.NS.3
3.	**A, C, D**	7.RP.2d
4.	**D**	7.EE.1
5.	**C**	7.NS.2b-2
6.	**A, B, E**	7.EE.2
7.	**C, E**	7.RP.2b
8.	The number with the least value is $n - p$ ▾ , and the number with the greatest value is $p - n$ ▾ .	7.NS.1b-1
9.	**2.25**	7.EE.4a-1

10.	**D**	7.RP.2b
11.	**B, D, E**	7.NS.2b-1
12.	**15, 18**	7.EE.4a-2
13.	$y = 8x$	7.RP.2c
14.	Part A: **12.50** Part B: The students in Naomi's class earned more money from the fund-raiser [last year ▾] by [$35 ▾] .	7.RP.3-2
15.	See rubric	7.D.1/7.EE.4

Unit 2

Item Number	Answer Key	Evidence Statement Key/Content Scope
1.		7.G.3
2.	$\frac{1}{4}$ or equivalent	7.SP.7a
3.	**B**	7.SP.6
4.	See rubric	7.C.7.3/7.NS.3
5.	A hamburger patty has approximately [5.7 ▾] grams of protein per ounce. The fish has approximately [5.3 ▾] grams of protein per ounce.	7.RP.1
6.	See rubric	7.D.3/7.RP.2
7.	Part A: see rubric Part B: see rubric	7.C.8/6.EE.5
8.	Part A: **C** Part B: **D**	7.G.4-1

Unit 3

Item Number	Answer Key	Evidence Statement Key/Content Scope
1.	$\frac{4}{15}$ or equivalent	7.RP.1
2.	Part A: **B** Part B: $\frac{8}{15}$ or equivalent	7.SP.8c
3.	See rubric	7.C.2/7.NS.1
4.	**B**	7.SP.4
5.	Part A: **12.5** Part B: **0.8**	7.G.1
6.	Part A: see rubric Part B: see rubric	7.D.2/6.RP.2, 6RP.3, and 6.EE.9
7.	**A, E**	7.RP.2a
8.	Class H Class F Class E Class G Part A: Part B: **1.125**	7.EE.3

Rubrics start on the next page.

Unit 1 #15 Rubric	
Score	**Description**
3	Student response includes each of the following 3 elements. • Correct number of minutes Sal jogged each day and correct number of minutes Elena jogged each day • Valid work or explanation for the number of minutes Sal jogged each day • Valid work or explanation for the number of minutes Elena jogged each day Sample Student Response: For Sal: $5x + 25 = 240$ $5x = 215$ $x = 43$ Sal jogged 43 minutes each day. For Elena: $5(x + 15) = 300$ $x + 15 = 60$ $x = 45$ Elena jogged 45 minutes each day.
2	Student response includes 2 of the 3 elements.
1	Student response includes 1 of the 3 elements.
0	Student response is incorrect or irrelevant.

Unit 2 #4 Rubric	
Score	**Description**
3	Student response includes each of the following 3 elements. • Identifies the step with the first error, Step 2 • Correct strategy for evaluating the expression • Provides correct value of the expression, 185 Sample Student Response: The first error was in step 2. The correct steps are:

	$2(-20) + 3\left(\frac{5}{4}(-20)\right) + 5\left(\frac{2}{5}(50)\right) + 4(50)$ step 1: $2(-20) + 3(-25) + 5(20) + 4(50)$ step 2: $-40 - 75 + 100 + 200$ step 3: $-115 + 300$ step 4: 185
2	Student response includes 2 of the 3 elements.
1	Student response includes 1 of the 3 elements.
0	Student response is incorrect or irrelevant.

Unit 2 #6 Rubric	
Score	**Description**
3	Student response includes each of the following 3 elements. • Approximation of the number of plants per square foot • Explanation of how the approximation was determined • Correct equation using the approximation Sample Student Response: To find the approximate number of plants that grew per square foot, I divided the total number of plants that grew by the total amount of square feet in the four sections. $160 \div 400 = 0.4$ The equation that represents the relationship is $y = 0.4x$. Note: Accept credit for other valid methods to determine the approximate number of plants that grew per square foot. Also, the rate of change value in the equation should equal the approximation given by the student.
2	Student response includes 2 of the 3 elements.
1	Student response includes 1 of the 3 elements.
0	Student response is incorrect or irrelevant.

Unit 2 #7 Rubric Part A	
Score	**Description**
2	Student response includes each of the following 2 elements. • Example that disproves Natalia's statement • Explanation of why the example disproves her statement

	Sample Student Response: $5x < 30$ $5(15) < 30$ $75 \not< 30$ Natalie's claim is incorrect because I chose 15, a number less than 25, and it did not make the inequality true. Since 75 is not less than 30, 15 is not a solution to the inequality. This disproves Natalia's claim.
1	Student response includes 1 of the 2 elements.
0	Student response is incorrect or irrelevant.

Unit 2 #7 Rubric Part B	
Score	**Description**
2	Student response includes each of the following 2 elements. • Correct description, in words, of the values of x that make the inequality true: x is less than 6 • Valid explanation given Sample Student Response: $5x < 30$ so if I divide both sides of the inequality by 5, I get $x < 6$. The values of x that make the inequality true are any values that are less than 6.
1	Student response includes 1 of the 2 elements.
0	Student response is incorrect or irrelevant.

Unit 3 #3 Rubric	
Score	**Description**
3	Student response includes each of the following 3 elements. • Valid statement about the value of x • Valid explanation about the statement regarding the value of x • Valid example, using numbers, that supports the explanation Sample Student Response: I know that $5 + (-5) = 0$. Then, 5 plus any number less than -5 will be negative. So, the value of x must be less than -5 if n is a negative number ($x < -5$ can be used as the statement). An example that shows this is true is $5 + (-6) = -1$, and this works for

	any number less than −5.
2	Student response includes 2 of the 3 elements.
1	Student response includes 1 of the 3 elements.
0	Student response is incorrect or irrelevant.

Unit 3 #6 Rubric Part A	
Score	Description
3	Student response includes each of the following 3 elements. • Explanation of how to find the amount of money received for any number of work-related miles driven • Correct amount of money received for each work-related mile driven, $0.51 • Correct equation based on the explanation given Sample Student Response: Since the table shows a proportional relationship, I can divide the amount of money received by the distance driven for any of the rows in the table. The worker receives $0.51 for each work-related mile driven. The equation that represents this is $y = 0.51x$ (or equivalent).
2	Student response includes 2 of the 3 elements.
1	Student response includes 1 of the 3 elements.
0	Student response is incorrect or irrelevant.
Unit 3 #6 Rubric Part B	
Score	Description
3	Student response includes each of the following 3 elements. • Correct number of work-related miles driven, 63 • Correct percent of total miles driven: 47% (or correct calculation based on incorrect number of work-related miles driven) • Correct explanation given or work shown Sample Student Response: The percent of total miles is found by dividing the work-related miles driven by the total number of miles driven. So, I must first determine the total number of miles that were work-related. I can use my equation from Part A to find the answer.

	$32.13 = 0.15x$ $x = \dfrac{32.13}{0.51} = 63$ $\dfrac{63}{134} \times 100 \approx 47\%$
2	Student response includes 2 of the 3 elements.
1	Student response includes 1 of the 3 elements.
0	Student response is incorrect or irrelevant.