TEKS: *(S)* = Supporting standard *(R)* = Readiness standard *(NT)* = Not tested

TEKS	5.1.A	5.1.D	5.1.G	5.4.A *(S)*	5.4.E *(S)*	5.4.F *(R)*	5.4.G *(NT)*	5.4.H *(R)*	5.6.A *(S)*	5.6.B *(S)*
Problem(s)	3	4	9, 10	8	10	7, 9	2, 4	2–6	1	1, 3

Problem 1

TEKS: 5.6.A, 5.6.B

4 Meeting	3 Approaching	2 Developing	1 Beginning
Correct response: 18	Some responses may show more understanding than others. Consider assigning Approaching or Developing based on what can be determined about the student's understanding when applicable		Response shows **limited understanding.**
	Students who select . . . • 12 may have thought the prism was only 2 layers.		

Problem 2

TEKS: 5.4.G, 5.4.H, 5.1.D

4 Meeting	3 Approaching	2 Developing	1 Beginning
Both correct choices and **no incorrect** choices. 3 × 4 × 5 5 × 12	**One correct** choice and **no incorrect** choices. **Both correct** choices and **one incorrect** choice.	**One correct** choice and **one incorrect** choice.	**Only incorrect** choices. **Two or more incorrect** choices with some correct choices.
	Students who select . . . • (3 + 4) × 5 or 3 × 4 + 5 correctly determined the prism's dimensions and may need more support understanding the operations needed to determine the volume. • 15 × 15 × 15 × 15 correctly determined there are 15 unit cubes in each of the 4 layers and may need more support understanding the operation needed to find the total.		

Math Process Standards: Response demonstrates an understanding of multiple representations (numeric expressions) for the volume of rectangular prisms. **(5.1.D)**

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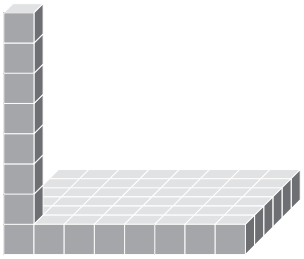
Problem 3

TEKS: 5.4.H, 5.6.B, 5.1.A

4 Meeting	3 Approaching	2 Developing	1 Beginning
Correct response: 384 boxes of paper clips Sample work shown. 	Response shows **conceptual understanding** with minor errors, omissions, and/or incomplete reasoning. E.g., Students who write an incorrect answer — but whose work or explanation shows evidence of understanding that the volume is the product of 48 and 8 — may have made an error in calculation.	Response shows **incomplete understanding** with significant errors. E.g., Students who write *56 boxes of paper clips* may have added 48 and 8 and may need support understanding the layered structure of rectangular prisms.	Response shows **limited understanding.**

Math Process Standards: Students apply the concept of volume to problems arising in everyday life. **(5.1.A)**

Problem 4

TEKS: 5.4.G, 5.4.H, 5.1.D

4 Meeting	3 Approaching	2 Developing	1 Beginning
Both correct choices and **no incorrect** choices. 6 × 20 4 × (5 × 6)	**One correct** choice and **no incorrect** choices.	**One correct** choice and **one incorrect** choice.	**Only incorrect** choices.
	Students who select . . . • 5 × 4 + 6 correctly determined the expression to represent the area of the base and may need more support understanding the operation needed to determine the volume.		

Math Process Standards: Response demonstrates an understanding of multiple representations (numeric expressions) for the volume of rectangular prisms. **(5.1.D)**

Problem 5

TEKS: 5.4.H

4 Meeting	3 Approaching	2 Developing	1 Beginning
Correct response: 10	Some responses may show more understanding than others. Consider assigning Approaching or Developing based on what can be determined about the student's understanding when applicable.		Response shows **limited understanding.**
	Students who select . . . • 7 may have added the length and width.		

Problem 6

TEKS: 5.4.H

4 Meeting	3 Approaching	2 Developing	1 Beginning
Correct response: 1,200 cubic inches	Response shows **conceptual understanding** with minor errors, omissions, and/or incomplete reasoning. E.g., Students who write *1,200 square inches* determined the correct numeric value and may need support with appropriate units of measure for area and volume.	Response shows **incomplete understanding** with significant errors. E.g., Students who write *300 inches* may have thought they were finding the length of a rectangle whose area is 200 square inches and whose height is 6 inches.	Response shows **limited understanding.**

Problem 7

TEKS: 5.4.F

4 Meeting	3 Approaching	2 Developing	1 Beginning
Correct response: 141	Some responses may show more understanding than others. Consider assigning Approaching or Developing based on what you can determine about the student's understanding, when applicable.		Response shows **limited understanding.**
	Students who select . . . • 138 correctly added 5 and 19 first and may need more support understanding the order of operations to multiply by 2 before subtracting 1. • 84 may have multiplied 2 by 5 first and then added 19 and may need more support understanding the order of operations. • 48 may have multiplied 3 by 2 first and may need more support understanding the order of operations.		

Problem 8

TEKS: 5.4.A

4 Meeting	3 Approaching	2 Developing	1 Beginning
All correct choices and **no incorrect** choices.	**Two correct** choices and **one incorrect** choice.	**One correct** choice and **two incorrect** choices.	**Only incorrect** choices.
	Students who select . . . • 33 and 47 as prime may have thought that all odd numbers are prime and may need more support understanding the difference between prime and composite numbers. • 51 as prime may have thought that 51 only had 1 pair of factors and may need more support determining pairs of factors.		

	Prime	Composite
33		✓
47	✓	
51		✓

Problem 9

TEKS: 5.4.F, 5.1.G

4 Meeting	3 Approaching	2 Developing	1 Beginning
Correct response: Sample explanation shown. Han added 20 and 12 on Line 2, but he should have added 3 + 7 first and then multiplied by 12 before adding 20. The parentheses tell us to do those operations first. The answer is 67 stickers.	Response shows **conceptual understanding** with minor errors, omissions, and/or incomplete reasoning. E.g., Students describe the error correctly but may need support with using the mathematical language of the unit, e.g., order of operations or parentheses.	Response shows **incomplete understanding** with significant errors. E.g., Students who may arrive at the correct number of stickers, 67, but may need more support understanding the expression representation and where Han made an error in finding its value.	Response shows **limited understanding.**

Math Process Standards: Response includes a clear explanation of Han's error and how he could correct his error using mathematical language, e.g., parentheses or order of operations. **(5.1.G)**

Problem 10

TEKS: 5.4.E, 5.1.D, 5.1.G

4 Meeting	3 Approaching	2 Developing	1 Beginning
Correct response: Sample explanation shown. No, Han is incorrect. The order of operations is different in each expression. The parentheses in 12(3 + 7) tell us to add first. 12(10) = 120. In 12 × 3 + 7, I multiply first. 36 + 7 = 43.	Response shows **conceptual understanding** with minor errors, omissions, and/or incomplete reasoning. E.g., Students describe how the parentheses in the expression 12(3 + 7) indicate addition before multiplication but may need support with using the mathematical language of the unit, e.g., order of operations.	Response shows **incomplete understanding** with significant errors. E.g., Students write that Han is correct and describe how the expressions have the same numbers and operations but may need support understanding how the expressions show a different order of operations.	Response shows **limited understanding.**

Math Process Standards:
Response demonstrates an understanding of how the 2 representations (numeric expressions) communicate different mathematical ideas. **(5.1.D)**

Response includes a clear explanation of the meaning of the parentheses using mathematical language, e.g., order of operations or multiplication. **(5.1.G)**