

| Item Number | Answer Key | Evidence Statement Key |
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| 1. | Part A: $\frac{\boxed{30}}{100} + \frac{\boxed{50}}{100} = \frac{\boxed{80}}{\boxed{100}}$ Part B: $\frac{50}{100}$ or equivalent number | 4.NF.Int.2 |
| 2. | Part A: 29 Part B: 116 Part C: See Rubric | 4.D.2 |
| 3. | Factors of 27 <div style="border: 1px solid black; padding: 5px; display: inline-block;"> 1 and 27 3 and 9 </div> | 4.OA.4-2 |
| 4. | D | 4.NF.1-2 |
| 5. | C | 4.NBT.2 |
| 6. | A, C, E | 4.NBT.Int.1 |
| 7. | Part A: A Part B: B | 4.NF.3d |
| 8. | C | 4.NF.3a |
| 9. | 392 Remainder: 2 or equivalent numbers | 4.NBT.6-2 |
| 10. | C | 4.NBT.1 |
| 11. | 1808 | 4.NBT.4-2 |
| 12. | $\frac{21}{4}$ or equivalent number | 4.NF.4c |
| 13. | Part A: A, E, F | 4.NF.A.Int.1 |

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| | Part B: B | | | | | | |
| 14. | $\frac{5}{12}$ | 4.NF.3a | | | | | |
| 15. | 80 | 4.MD.6 | | | | | |
| 16. | 1.32 $>$ 1.29 | 4.NF.7 | | | | | |
| 17. | C | 4.OA.2 | | | | | |
| 18. | Part A: See Rubric Part B: D | 4.D.1 | | | | | |
| 19. | Part A: B, C Part B: B | 4.NBT.Int.1 | | | | | |
| 20. | <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>5</td><td>×</td><td>8</td><td>=</td><td>40</td></tr></table> or equivalent equation | 5 | × | 8 | = | 40 | 4.OA.1-2 |
| 5 | × | 8 | = | 40 | | | |
| 21. | See Rubric | 4.C.6-1 | | | | | |
| 22. | D | 4.NBT.4-1 | | | | | |
| 23. | Part A: 125 Part B: B | 4.MD.7 | | | | | |
| 24. | C | 4.OA.3-1 | | | | | |
| 25. | Part A: See Rubric Part B: See Rubric | 4.C.5-6 | | | | | |
| 26. | B | 4.NF.3c | | | | | |
| 27. | 26610 | 4.Int.3 | | | | | |
| 28. | <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>11</td><td>×</td><td>10</td><td>=</td><td>110</td></tr></table> or equivalent equation | 11 | × | 10 | = | 110 | 4.OA.1-1 |
| 11 | × | 10 | = | 110 | | | |
| 29. | Part A: A, C, E Part B: C | 4.NF.Int.1 | | | | | |
| 30. | B, F | 4.G.2 | | | | | |
| 31. | 1757 | 4.Int.7 | | | | | |

**#2 Rubric Part A
0083-M00453**

| Score | Description |
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| 1 | <p>This part of the item is machine scored.</p> <ul style="list-style-type: none"> Computation component = 1 point |

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| | Sample Student Response: <ul style="list-style-type: none"> • 29 |
| 0 | Student response is incorrect or irrelevant. |
| #2 Rubric Part B 0083-M00453 | |
| Score | Description |
| 1 | <p>This part of the item is machine scored.</p> <ul style="list-style-type: none"> • Computation component = 1 point <p>Sample Student Response:</p> <ul style="list-style-type: none"> • 116 |
| 0 | Student response is incorrect or irrelevant. |
| #2 Rubric Part C 0083-M00453 | |
| Score | Description |
| 4 | <p>Student response includes the following 4 elements.</p> <ul style="list-style-type: none"> • Modeling component = 3 points <ul style="list-style-type: none"> ○ Valid equation, using a variable to stand for the unknown number, is provided to find the number of customers prior to adding the new levels ○ Valid estimate of the number of empty spaces after the addition ○ Valid work or explanation for the estimate of empty spaces • Computation component = 1 point <ul style="list-style-type: none"> ○ Correct number of customers prior to adding the new levels, 73 <p>Sample Student Response:</p> <p>The number of customers prior to the addition can be found using the equation $171 - 98 = c$.</p> <p>There were 73 customers prior to the addition.</p> <p>The first 3 levels had a total of 87 parking spaces and the 2 new levels added 116 parking spaces, for a total of 203 parking spaces.</p> <p>The garage had a total of 171 customers, so $203 - 171 = 32$ which rounded to the nearest ten is 30 empty spaces.</p> <p>Or other valid response.</p> |

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| 3 | Student response includes 3 of the 4 elements. |
| 2 | Student response includes 2 of the 4 elements. |
| 1 | Student response includes 1 of the 4 elements. |
| 0 | Student response is incorrect or irrelevant. |

**#18 Rubric Part A
4010-M03038**

| Score | Description |
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| 2 | <p>Student response includes the following 2 elements.</p> <ul style="list-style-type: none"> • Modeling component = 1 point <ul style="list-style-type: none"> ○ Valid explanation or work • Computation component = 1 point <ul style="list-style-type: none"> ○ Correct computation, \$12 <p>Sample Student Response:</p> <p>First, multiply 2 by 4 to get a total of 8 students selling tickets. Then, divide 150 by 8 to get 18 with a remainder of 6. This means each student got 18 tickets to sell and the teacher bought the 6 leftover tickets. Since the tickets are selling for \$2 each, multiply 2 by 6 to get \$12. So the band teacher spent \$12 on tickets.</p> <p>Or other valid response.</p> |
| 1 | Student response includes 1 of the 2 elements. |
| 0 | Student response is incorrect or irrelevant. |

**#18 Rubric Part B
4010-M03038**

| Score | Description |
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| 1 | <p>This part of the item is machine scored.</p> <ul style="list-style-type: none"> • Modeling component = 1 point <p>Sample Student Response:</p> <ul style="list-style-type: none"> • D |
| 0 | Student response is incorrect or irrelevant. |

**#21 Rubric
M00235**

| Score | Description |
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| 4 | <p>Student response includes each of the following 4 elements.</p> <ul style="list-style-type: none"> • Reasoning component = 4 points <ul style="list-style-type: none"> ○ Valid ways to use leftover fabric; 2 of the following: one pillow and one placemat, two placemats, one pillow, one placemat ○ Valid work or explanation for the number of yards needed for two of each item and for the number of yards remaining after two of each item is made ○ Valid work or explanation for how to use leftover fabric in Use 1 ○ Valid work or explanation for how to use leftover fabric in Use 2 <p>Sample Student Response:</p> <p>The first way Lindsey could use the leftover fabric would be to make another pillow and another placemat. She would have 0 yards left over.</p> $27 - 2(6 + 3 + 2) = 5$ $5 - 3 - 2 = 0$ <p>Another way she could use the leftover material would be to make a pillow. She would then have 2 yards left over.</p> $27 - 2(6 + 3 + 2) = 5$ $5 - 3 = 2$ <p>Note: Any other single or combination that results in less than or equal to 5 yards being used is acceptable.</p> |
| 3 | Student response includes 3 of the 4 elements. |
| 2 | Student response includes 2 of the 4 elements. |
| 1 | Student response includes 1 of the 4 elements. |
| 0 | Student response is incorrect or irrelevant. |

#25 Rubric Part A
0640-M20679

| Score | Description |
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| 2 | <p>Student response includes the following 2 elements.</p> <ul style="list-style-type: none"> • Reasoning component = 1 point <ul style="list-style-type: none"> ○ Valid explanation of how to determine the correct area of the entire patio using a different method • Computation component = 1 point <ul style="list-style-type: none"> ○ Correct computation of the area, 40 square feet <p>Sample Student Response:</p> <p>Multiplication could also be used to find the area of the entire patio. Since each tile represents 1 square foot, that means that the length is 8 feet long and the width is 5 feet long. To find the area, I can multiply the length times the width, 8×5. This gives an area of 40 square feet, which is the same square footage that is found by adding up all the tiles.</p> <p>OR</p> <p>An addition equation that could be used to find the entire area of the patio.</p> <p>There are 5 rows with 8 tiles in each row, which can be represented by $8 + 8 + 8 + 8 + 8 = 40$. (Student can also say there are 8 rows with 5 tiles each, represented by $5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 = 40$.)</p> <p>Or other valid response.</p> |
| 1 | Student response includes 1 of the 2 elements. |
| 0 | Student response is incorrect or irrelevant. |

#25 Rubric Part B
0640-M20679

| Score | Description |
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| 2 | <p>Student response includes the following 2 elements.</p> <ul style="list-style-type: none"> • Reasoning component = 1 point <ul style="list-style-type: none"> ○ Valid explanation of how to find the correct answer. • Computation component = 1 point <ul style="list-style-type: none"> ○ Correct computation, 4 square feet <p>Sample Student Response:</p> |

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| | <p>To find the correct difference, I need to know the area of the border and the area inside the border. The area of the border is the total area of the patio minus the area inside the border. The area of the tiles inside the border is $3 \times 6 = 18$. The area of the border is 22 square feet. The difference between the area of the inside tiles and the area of the border tiles is $22 - 18 = 4$. The border is 4 square feet more than the area inside the border.</p> <p>Or other valid response.</p> |
| 1 | Student response includes 1 of the 2 elements. |
| 0 | Student response is incorrect or irrelevant. |