

MeTEOR Performance Task

Algebra I

Mathematics

Expressions with a Picture Frame



Complete Performance Task Scoring Rubric *Expressions with a Picture Frame*

22-24 Proficient 19-21 Good 17-18 Satisfactory 14-16 Poor 0-13 Unsatisfactory

	Depth of Knowledge Level	Points	Total Possible Points for Task	Total Points Earned by Student
<p>Task 1:</p> <p>A. A number, variable, product or quotient in an expression.</p> <p>B. A number that appears in front of a variable in an expression.</p> <p>C. A number value that cannot change.</p> <p>D. $4x + 3$, $2x + 22$, $x + 18$</p> <p>E. $4m - 2$, $3 \times 7 - m$</p> <p>F. $\\$50h + 125$, total $\\$275$</p>	1	<p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p>	6	
<p>Task 2:</p> <p>A. $2x + 14$, $x^2 + 6x + 8$ $3x^2 - 9x$, $2x^2y^2 + 4x^2y - 7xy$ $x^2 + 18x + 81$</p> <p>B. $2(x + 4)$, $(x + 3)(x + 4)$ $(x + 3)(x - 3)$, $(2x + 7)(3x - 4)$ $3x^3(x - 3y)(x + 5y)$</p> <p>C. Amount of terms: Monomial has one term, Binomial has two terms, Trinomial has three terms</p> <p>D. Drops out/eliminates</p> <p>E. Division</p>	1	<p>2</p> <p>2</p> <p>1</p> <p>1</p> <p>1</p>	7	

<p>Task 3:</p> <p>A. $x + (2x + 5) + (x + 5) = 50$</p> <p>B. $x = 10$</p> <p>C. 10, 25, 15</p> <p>D. Answers will vary. Possible Explanation: "I can substitute the value of x, which is 10, into the problem. Then, when I multiply and add I get the same answer equal to 50."</p>	<p>2</p>	<p>1</p> <p>1</p> <p>1</p> <p>2</p>	<p>5</p>	
<p>Task 4:</p> <p>A. $x =$ width in inches</p> <p>B. 24 square inches</p> <p>C. $x = 1$ inch Answers will vary. Possible Explanation: "First, I drew a picture and noticed that the length would be $2x + 6$ and the width would be $2x + 4$. Since area is length times width, I multiplied the measures as binomials and got $4x^2 + 20x + 24$. I knew I could solve for x by setting this equation to equal the total area of the strip and inner rectangle which was 48 square inches. I ended up with $x = -6$ and 1. Since the negative would not work in distance it had to be 1. Finally, I substituted the 1 back in and found that it worked."</p> <p>D. Answers will vary. Possible Explanation: "I knew the picture and strip around would make the new dimensions 10 by 12. The area would then be 120 square inches. The area of the smaller one was 48 square inches. This makes a difference of 72 square inches."</p>	<p>3</p>	<p>1</p> <p>1</p> <p>2</p> <p>2</p>	<p>6</p>	
TOTAL POINTS:				



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