

# MeTEOR Performance Task

## Third Grade

Mathematics  
Cards for Soldiers

## **Performance Task Item: Cards for Soldiers**

Grade Level: Third Grade

**Focus Area:** Operations and Algebraic Thinking

**Essential Question:** What strategies that are most useful in solving problems?

**Core Ideas:**

- Understands how to use the four operations to solve multi-step problems.
- Understands how to find the unknown.
- Understands how to use various strategies that are helpful in solving problems.

**Learning Targets:**

- Students will apply multiplication and division to solve problems.
- Students will write equations.
- Students will make a model.
- Students will solve multi step problems.

## **STANDARDS**

### **Domain: Operations and Algebraic Thinking**

**Content Standards:**

- Interpret products of whole numbers, e.g., interpret  $5 \times 7$  as the total number of objects in 5 groups of 7 objects each.
- Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
- Determine the unknown whole number in a multiplication or division equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations  $8 \times ? = 48$ ,  $5 = \_ \div 3$ ,  $6 \times 6 = ?$*
- Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

**Math Practice Standards:**

MP 1: Make sense of problems and persevere in solving them.

MP 2: Reason abstractly and quantitatively.

MP 5: Use appropriate tools strategically.

MP 6: Attend to precision.

MP 7: Look for and make use of structure.

**Materials:**

- Performance Task
- Pencil
- Paper
- Calculator

**Task/Question 1:**

**DOK Level 1:** Recall & Reproduction

**Math Practice Standard:**

- MP 5: Use appropriate tools strategically.

- A.** Your Art Teacher has asked your class to make cards for 108 soldiers who are away from their families serving our country. She wants you and your classmates to make the same number of cards. How many cards would 27 students each need to make?  $27 \times a = 108$   
(Show your work below)

**Task/Question 2:**

**DOK Level 2:** Basic Application of Skills and Concepts

**Math Practice Standards:**

- MP 1: Make sense of problems and persevere in solving them.
- MP 2: Reason abstractly and quantitatively.
- MP 5: Use appropriate tools strategically.
- MP 7: Look for and make use of structure.

- A.** If three students in your class are gone the day you are making the cards (from task/question 1), how many cards will each student now have to make?
- B.** Can the number of cards needed to be made be distributed evenly among the new amount of students present?
- C.** Explain your answer to part B by writing a division equation and drawing a picture of your model:

## Task/Question 3:

**DOK Level 3:** Strategic Thinking and Complex Reasoning

### Math Practice Standards:

- MP 1: Make sense of problems and persevere in solving them.
- MP 2: Reason abstractly and quantitatively.
- MP 5: Use appropriate tools strategically.
- MP 6: Attend to precision.
- MP 7: Look for and make use of structure.

- A.** Before your class mails the cards to the soldiers, you need to investigate the total mailing cost. Your class goal is to mail the cards at the **best rate**.

Determine which of the following mailing options would be the most economical way to mail the 108 cards:

- One stamp per envelope/card - cost **.47**
- One large 9x12 envelope/holds 18 cards - cost **\$2.73**
- One Large Flat Rate box/holds all 108 cards - costs **\$18.75**

- B.** Justify/Defend the mailing option you chose in Part A:

## Complete Performance Task Scoring Rubric *Cards for Soldiers*

25-30 Proficient 18-24 Good 12-18 Satisfactory 6-11 Poor 0-5 Unsatisfactory

	Depth of Knowledge Level	Points	Total Possible Points for Task	Total Points Earned by Student
<b>Task 1:</b> A. $27 \times a = 108$  $a = 4$	<b>1</b>	<b>4</b>	<b>4</b>	
<b>Task 2:</b> A. 4.5 cards  B. No  C. $108 \div 24 = 4.5$ Models will vary by student	<b>1</b>	<b>2</b>	<b>10</b>	
<b>Task 3:</b> A. The large 9 x 12 envelopes are the most economical mailing option. It is \$2.37 cheaper than using the large flat rate box. <ul style="list-style-type: none"> <li>• One stamp per envelope costs <math>.47 \times 108 = \\$50.76</math></li> <li>• One large 9x12 envelope cost \$2.73 but only holds 18 cards. <math>108 \div 18 = 6</math>, <math>6 \times 2.73 = \\$16.38</math></li> <li>• One Large Flat Rate box costs \$18.75 and will hold all 108 cards</li> </ul> B. Student justification statements will vary.	<b>2</b>	<b>8</b>	<b>16</b>	
<b>TOTAL POINTS:</b>				



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