

# MeTEOR Performance Task

## Fourth Grade

Mathematics

*Perfect Attendance*



## **Performance Task Item: Perfect Attendance**

*Grade Level: Fourth Grade*

**Focus Area:** Operations and Algebraic Thinking: Number and Operations in Fraction

### **Essential Questions:**

- How can I estimate the answers for operations involving two and three digit numbers?
- How do I explain the meaning of a fraction and its numerator and denominator, and use my understanding to represent and compare fractions?

### **Core Ideas:**

- Understands how to compare fractions.
- Understands how to use computation to solve real world problems.

### **Learning Targets:**

- Students will use computation to solve real world problems.
- Students will convert fractions to equivalent fractions with a common denominator in order to compare them more easily.
- Students will draw visual representations.
- Students will use estimation skills to solve problems.
- Students will explain mathematical thinking.

## **STANDARDS**

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

#### **Content Standards:**

- Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.

### **Domain: Number and Operations in Base Ten**

#### **Content Standards:**

- Use place value understanding to round multi-digit whole numbers to any place.
- Fluently add and subtract multi-digit whole numbers using the standard algorithm.

### **Domain: Number and Operations in Fraction**

#### **Content Standards:**

- Explain why a fraction  $a/b$  is equivalent to a fraction  $(n \times a)/(n \times b)$  by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.
- Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as  $1/2$ . Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols  $>$ ,  $=$ , or  $<$ , and justify the conclusions, e.g., by using a visual fraction model.

**Math Practice Standards:**

MP 2: Reason abstractly and quantitatively.

MP 3: Construct viable arguments and critique the reasoning of others.

MP 7: Look for and make use of structure.

**Materials:**

- Performance Task
- Pencil
- Paper

**Task/Question 1:**

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

**Math Practice Standards:**

- MP 2: Reason abstractly and quantitatively.
- MP 7: Look for and make use of structure.

Your school is planning a party for students who have perfect attendance. The chart below shows the number of students that are invited to the Perfect Attendance Party.

Teacher	# of students participating
Mrs. Jones - Kindergarten	3
Mrs. Baker – 1 <sup>st</sup> Grade	7
Mr. Thomas – 2 <sup>nd</sup> Grade	6
Mrs. Parker – 3 <sup>rd</sup> Grade	4
Mrs. Pena– 4th Grade	6
Mr. Collins – 5th Grade	7

- Estimate how many students are participating in the perfect attendance party?
- Explain in writing your mathematical thinking for your estimate in Part A.
- How close was your estimate in question A to the actual answer?

**Task/Question 2:**

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

**Math Practice Standards:**

- MP 2: Reason abstractly and quantitatively.
- MP 3: Construct viable arguments and critique the reasoning of others.
- MP 7: Look for and make use of structure.

- A.** Your principal decided to have pizza and drinks at the Perfect Attendance Party. One pizza will feed 4 students. Based on the numbers participating in Task/Question 1, how many pizzas are needed for all of the students?
- B.** If each pizza costs \$9.99 **about** how much money will be spent on pizza?
- C.** A budget of \$121.00 was set to cover the cost of pizza and drinks for the party. Based on your estimate for the cost of pizza in Part B, **about** how much money can be spent on drinks?
- D.** Create a challenge question for your math partner that changes **one** component of the Perfect Attendance Party (cost of pizza, number of students each pizza serves, the budget, number of students attending the party, etc.).
- E.** Trade challenge problems with your math partner. Answer the challenge question and provide feedback to your partner on his/her challenge problem.

**Task/Question 3:**

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

**Math Practice Standards:**

- MP 2: Reason abstractly and quantitatively.
- MP 3: Construct viable arguments and critique the reasoning of others.
- MP 7: Look for and make use of structure.

**A.** You noticed each pizza has 12 slices and  $\frac{3}{4}$  of the total pizzas purchased were left over. Draw a visual representation of the pizza left over.

**B.** Your friend thought  $\frac{2}{3}$  of the pizza was left over. If your friend is correct, draw a visual representation to show how much pizza is leftover now.

**C.** Compare the fractions using comparison symbols  $<$ ,  $>$ ,  $=$

## Complete Performance Task Scoring Rubric Perfect Attendance

39-45 Proficient   30-38 Good   21-29 Satisfactory   11-20 Poor   0-10 Unsatisfactory

	Depth of Knowledge Level	Points	Total Possible Points for Task	Total Points Earned by Student
<b>Task 1:</b> A. A reasonable estimation would be 30.  B. Answers will vary.  C. Answers will vary. Possible Explanation: "My estimation was close to the actual number. The difference was 3."	1  2  2	3  3  3	9	
<b>Task 2:</b> A. 9  B. about \$90.00  C. about \$31.00 can be spent on drinks  D. Answers will vary. Total points for completing a challenge problem.  E. Answer will vary. Total points for participation.	2  1  2  3  2	3  3  5  8  8	27	
<b>Task 3:</b> A. Answers will vary. Total points for creating a viable representation.  B. Visual representation of the pizza left over can vary by students.  C. $\frac{3}{4} > \frac{2}{3}$ since $\frac{9}{12} > \frac{8}{12}$	2	3  3  3	9	

**TOTAL POINTS:**



[meteoreducation.com](http://meteoreducation.com) . 800.699.7516

MeTEOR CONNECT, MeTEOR Education and MeTEOR Design are trademarks or registered trademarks of MeTEOR Education, LLC © 2019.

All rights reserved. PTMATH4.4