

Directions: Answer the following question(s).

1 Which strategy for multiplying 872 and 5 should result in the correct product?

- A.

8	7	2
5 × 8 = 40	5 × 7 = 35	5 × 2 = 10

 40 + 35 + 10 = 85
- B. 872×5
 $(800 + 5) + (70 + 5) + (2 + 5)$
 $805 + 75 + 7$
 887
- C.

800	70	2
5 × 800 = 4,000	5 × 70 = 350	5 × 2 = 10

 4,000 + 350 + 10 = 4,360
- D. 872×5
 $(800 + 5) \times (70 + 5) \times (2 + 5)$
 $805 \times 75 \times 7$
 422,625

Master ID: 3810315 Revision: 1
 Correct: C
 Rationale:
 A. This is the result of incorrectly setting up an area model to multiply the numbers together.
 B. This is the result of incorrectly adding the 5 to the separated values instead of multiplying by 5.
 C. Correct answer
 D. This is the result of incorrectly adding the 5 to the separated values of 872 and then multiplying the sums together.
 Standards:
 MGSE4.NBT.5

2 What is the product of 3,904 and 6?

- A. 18,404
 B. 23,424
 C. 68,404
 D. 185,424

Master ID: 3810314 Revision: 1
 Correct: B
 Rationale:
 A. This is the result of incorrectly multiplying the two numbers together.
 B. Correct answer
 C. This is the result of incorrectly multiplying the two numbers together.
 D. This is the result of incorrectly multiplying the two numbers together.
 Standards:
 MGSE4.NBT.5

3 **TEACHER READS:**

Read the question to yourself and select the best answer.

Solve.

$224 \div 7 =$

- A. 30
 B. 32
 C. 34
 D. 36

Master ID: 3571729 Revision: 1
 Correct: B
 Rationale:
 A. Student(s) may have neglected to subtract 21 from 22 during the division process and instead divided 7 into 4 instead of 14.
 B. Correct answer
 C. Student(s) may have mistaken the 4 in the ones place of the dividend to also be located in the ones place of the quotient.
 D. Student(s) may have made a calculation error when solving.
 Standards:
 MGSE4.NBT.6

Directions: Answer the following question(s).

4 Lily has 3 lollipops and Jane has 4 **times as many**. How many lollipops do they have altogether?

- A. 7
- B. 15
- C. 12
- D. 34

Master ID: 3494911 Revision: 1
 Correct: B
 Standards: MGSE4.OA.3

5 Which of the following is a PRIME number?

- A. 9
- B. 17
- C. 27
- D. 33

Master ID: 3294078 Revision: 1
 Correct: B

Rationale:

- A. Student(s) may have recognized that most prime numbers are odd. Student(s) may not have realized that 9 is factorable. Student(s) may have assumed that, since 9 is only factorable by a prime number, 9 is a prime number as well.
- B. Correct answer
- C. Student(s) may have recognized that most prime numbers are odd. Student(s) may not have realized that 27 is factorable. Student(s) may have assumed that, since 27 is factorable by a prime number, 27 is a prime number as well.
- D. Student(s) may have recognized that most prime numbers are odd. Student(s) may have recognized that 3 is a prime number and may have thought that this was a prime number as well.

Rubric: 1 Point(s)

Standards: MGSE4.OA.4

6 Megan went to the store and bought five packages of meat for \$4 each and eight bags of pasta for \$7 each. How much money did she spend?

- A. \$76
- B. \$40
- C. \$28
- D. \$20

Master ID: 3293828 Revision: 1
 Correct: A

Rationale:

- A. Correct answer
- B. Student(s) multiplied the number of items bought, ignoring the unit cost.
- C. Student(s) multiplied cost of each type of item, ignoring the quantity purchased.
- D. Student(s) only calculated the meat price.

Rubric: 1 Point(s)

Standards: MGSE4.OA.3

7 Molly has 20 peanuts. Jackie has 7 times as many peanuts as her friend Molly. How many peanuts does Jackie have?

- A. 7
- B. 27
- C. 120
- D. 140

Master ID: 3247794 Revision: 1
 Correct: D

Rationale:

- A. Student(s) may have seen that Jackie had "7 times" and believed that meant she had 7 peanuts.
- B. Student(s) may have added the two numbers together.
- C. Student (s) may have multiplied incorrectly and got the answer for 6×20 .
- D. Correct answer

Rubric: 1 Point(s)

Standards: MGSE4.OA.2

Directions: Answer the following question(s).

8 Gabe's pet lizard is 8 inches long from its nose to the end of its tail. His pet dog is 48 inches long from its nose to the end of its tail. How many times longer is the dog than the lizard?

- A. 6
- B. 8
- C. 40
- D. 56

Master ID: 3247659 Revision: 1
 Correct: A
 Rationale:
 A. Correct answer
 B. Student(s) may have seen the number 8 in the word problem and thought that meant it was eight times longer.
 C. Student(s) may have subtracted 8 from 48.
 D. Student(s) may have added 8 and 48.
 Rubric: 1 Point(s)
 Standards:
 MGSE4.OA.2

9 If the pattern continues, what number shows the

In	Out
16	4
32	8
64	16
128	?

missing output value?

- A. 20
- B. 28
- C. 32
- D. 144

Master ID: 3247328 Revision: 1
 Correct: C
 Rationale:
 A. Student(s) may have noticed that 4 plus 4 is 8 and then added 4 to 16.
 B. Student(s) may have thought to add all the numbers in the right column to determine the missing output value.
 C. Correct answer
 D. Student(s) may have assumed that to find the missing output value that the last number in the left column needed to be added to the last number presented in the right column.
 Rubric: 1 Point(s)
 Standards:
 MGSE4.OA.5

Directions: Answer the following question(s).

10 Which of the following comparisons BEST represents the equation $27 = 3 \times 9$?

- A. 27 is 9 times as many as 3
- B. 9 is 27 times as many as 3
- C. 9 is 3 times as many as 27
- D. 3 is 9 times as many as 27

Master ID: 3246580 Revision: 1
Correct: A
Rationale:
A. Correct answer
B. Student(s) may have read the equation as "27 times 3 equals 9." Student(s) may have had an incomplete understanding of how to read equations.
C. Student(s) may have interpreted the statement "9 is 3 times as many as 27" as "9 times 3 equals 27."
D. Student(s) may have interpreted the statement "3 is 9 times as many as 27" as "3 times 9 equals 27."
Rubric: 1 Point(s)
Standards:
MGSE4.OA.1a