Directions: Answer the following question(s).

1 Which option shows *all* the factors of 35?

A. 0, 5, 7
B. 1, 5, 7, 35
C. 36, 37, 38
D. 1, 5, 7

Master ID: 3236149 Revision: 1
Correct: B
Rationale:
A. Student(s) may have forgotten that 1 and the number given are factors; student(s) may have mistakenly believed that 0 is a factor of numbers.
B. Correct answer
C. Student(s) may not have understood what was being asked and gave the numbers following 35.
D. Student(s) may have misunderstood the question and found the prime factors instead of all factors.
Rubric: 1 Point(s)

2 Trevor's aunt wants to buy a new motorcycle that costs $10,000. If she sold her old motorcycle for $4985, then how much more money does she need to buy the new motorcycle?

A. $14,985
B. $6985
C. $6015
D. $5015

Master ID: 3272941 Revision: 1
Correct: D
Rationale:
A. Student(s) may not have carefully read the problem and added the numbers instead of subtracting.
B. Student(s) may have been unfamiliar with how to borrow across the zeroes and assumed that 0– 5 is 5, 0–8 is 8, 0– 9 is 9 and 10 – 6 to find the answer.
C. Student(s) may have correctly borrowed across the zeroes until the thousands place and subtracted 4 from 10 instead of 4 from 9.
D. Correct answer
Rubric: 1 Point(s)

Directions: Answer the following question(s).

3 Mrs. Fenske wants to buy pizza for her class. There are 37 children in the class. Each pizza serves 10 children. How many whole pizzas should Mrs. Fenske buy so that each child gets one slice?

A. 2
B. 3
C. 3.7
D. 4

Master ID: 3275493 Revision: 1
Correct: D
Rationale:
A. Student(s) may not have known how to estimate the amount needed and thought since there is one class that more than one box would be sufficient.
B. Student(s) may not have known to round up to the next whole pizza. Student(s) may have rounded down to three pizzas instead.
C. Student(s) may have not estimated, but decided to divide 37 by 10 and ignored the issue of whole pizzas and estimation.
D. Correct answer
Rubric: 1 Point(s)

4 Solve:

$6 \times 2,947 =$_____

A. 17,648
B. 17,672
C. 17,682
D. 17,676

Master ID: 3287479 Revision: 1
Correct: C
Rationale:
A. Student(s) made a calculation error when multiplying the numbers.
B. Student(s) made a calculation error when multiplying the numbers.
C. Correct answer
D. Student(s) multiplied 6×7 incorrectly to get 36 instead of 42.
Rubric: 1 Point(s)

5 Which symbol will make the following number sentence true?

$8956 \square 8659$

A. <
B. >
C. =
D. Not given

Master ID: 3275331 Revision: 1
Correct: B
Rationale:
A. Student(s) may have confused the "less than" symbol with the "greater than" symbol and picked the incorrect answer.
B. Correct answer
C. Student(s) may not have carefully read the problem and assumed that because each number had the same digits, that the two numbers were equal.
D. Student(s) may have been unfamiliar with the symbols and assumed that the problem needed addition, subtraction, multiplication or division to be solved.
Rubric: 1 Point(s)

6 56_4 > 5639

Which of the following numbers could be placed in the space to make the following comparison true? Select *two* that apply

A. 2
B. 8
C. 6
D. 3

Master ID: 3230604 Revision: 1
Correct: BC
Rationale:
A. Student(s) may have confused the greater than and less than signs.
B. Correct answer
C. Correct answer
D. Student(s) may not have realized that placing a three here would make the number on the left less than the one on the right.
Rubric: 1 Point(s)

Directions: Answer the following question(s).

7

There were 12 balloons at the party. Sergio popped 3 balloons and Kevin popped 4 balloons. What fraction of the balloons did the boys pop together?

A. $\frac{3}{4}$

B. $\frac{7}{12}$

C. $\frac{4}{12}$

D. $\frac{3}{12}$

Master ID: 3258305 Revision: 1
Correct: B
Rationale:
A. Student(s) may have used the two numbers from the problem (3 and 4) and turned these into a fraction.
B. Correct answer
C. Student(s) may have found the fraction for the number of balloons that Kevin popped.
D. Student(s) may have found the fraction for the number of balloons that Sergio popped.
Rubric: 1 Point(s)

8 Jackson made $6 last week. Dylan made 12 times as much as Jackson. Which equation shows how much money Dylan made last week?

A. $6 \times 2 = 12$

B. $6 + 12 = 18$

C. $12 + 12 = 24$

D. $6 \times 12 = 72$

Master ID: 2205820 Revision: 3
Correct: D
Rationale:
A. This is a true multiplication equation but not one that matches the information given in the stem.
B. This is the result of adding 12 to 8.
C. This is the result of thinking the sum of 12 and 12 represents the answer.
D. To find the amount Jackson made, multiply the amount Dylan made by 12.
Rubric: 1 Point(s)

9 Angelina has 1,234 shells in her collection. What is the number name for this number?

A. one thousand, two hundred thirty-four

B. one hundred thousand, two hundred thirty-four

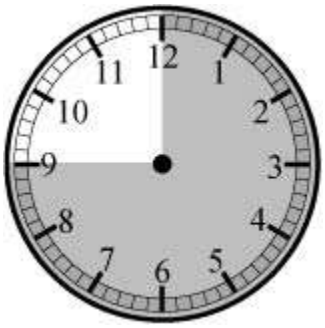
C. one thousand, thirty-four

D. one thousand, three hundred twenty-four

Master ID: 304309 Revision: 4
Correct: A
Rationale:
A. This is the result of correctly recognizing the value of each digit and translating the number to a number name.
B. This is the result of confusing the thousands place with the hundred thousands place.
C. This is the result of omitting the digit in the hundreds place.
D. This is the result of transposing the digits in the hundreds and tens places.
Rubric: 1 Point(s)

Directions: Answer the following question(s).

10 Springville Middle School has 7 class periods in a school day. Each class period lasts for a fraction of an hour as shown by the shaded part of the clock below.



Which of these shows the total length of time, in hours, of the school day?

A. $4\frac{1}{7}$ hours

B. $5\frac{1}{4}$ hours

C. $5\frac{1}{2}$ hours

D. $7\frac{3}{4}$ hours

Master ID:	2111740 Revision:	3
Correct:	B	

Rationale:

A. This is the result of incorrectly solving by using the denominator (4) as the whole number and adding that to the fraction of a day each class period is (1/7).

B. This is the result of correctly multiplying the number of class periods (7) by the fraction of an hour each class period is (3/4). 7 x 3/4 = 21/4 = 5 1/4 hours.

C. This is the result of correctly multiplying 7 x 3/4 but making an error when simplifying the fraction 21/4 to 5 1/2 instead of 5 1/4.

D. This is the result of incorrectly solving by simply adding the numbers in the stem (3/4 of an hour) and 7 class periods.

Rubric: 1 Point(s)

11 How do you write 0.13 as a fraction?

A. $\frac{13}{100}$

B. $\frac{10}{13}$

C. $\frac{13}{10}$

D. $\frac{100}{13}$

Master ID:	3252360 Revision:	1
Correct:	A	

Rationale:

A. Correct answer

B. Student(s) may have thought that two digits to the right of the decimal point was showing tenths, rather than hundredths. Student(s) may have reversed the numerator and denominator.

C. Student(s) may have thought that two digits to the right of the decimal point was showing tenths, rather than hundredths.

D. Student(s) may have reversed the numerator and denominator.

Rubric: 1 Point(s)

Directions: Answer the following question(s).

12 $10 \times \frac{1}{100} = \square$

A. $10\frac{1}{100}$

B. $\frac{10}{100}$

C. $\frac{10}{1000}$

D. $\frac{1}{1000}$

Master ID: 3244675 Revision: 1
Correct: B
Rationale:
A. Student(s) may have added the whole number to the fraction instead of multiplying.
B. Correct answer
C. Student(s) may have multiplied the whole number by both the numerator and denominator of the fraction.
D. Student(s) may have multiplied the whole number by the denominator of the fraction.
Rubric: 1 Point(s)