Unit 7 Review
Test: January 27
Review Due: January 26

1. Which expression has a value of 6?
   a. $(6 \div 3) \times 4 + 8$
   b. $27 - 9 \div 3 \times (4 + 1)$
   c. $(18 + 12) \times 6 - 4$
   d. $71 - 5 \times (9 + 4)$

2. To find the total cost of a field trip, use the equation $c = 4s$, where s is the number of students and c is the cost of the field trip. How much will it cost for 14 students to attend the field trip?
   a. $15
   b. $17
   c. $56
   d. $60

3. Prince Frederic needs to simplify $3 \times (8 - 4) + 7$. What should be his first step?
   a. Add 7 to 4
   b. Subtract 4 from 8
   c. Multiply 3 by 7
   d. Add 3 to 7

4. Zaubera simplified each of the expressions shown. What is the difference between the values of the two expressions?

   $3 \times 12 - 9 + 10$ $3 \times (12 - 9) + 10$

   a. 9
   b. 18
   c. 12
   d. 22

5. Ruffian the Blue correctly completed the table for a pattern modeled by an equation.

s	48	36	24	12
t	12	9	6	3

What could have been the equation?
    a. $t = s + 36$
    b. $t = s - 36$
    c. $s = \frac{1}{4} t$
    d. $t = \frac{1}{4} s$

6. Decide if the pattern shown in table is additive or multiplicative. Write a rule to describe the pattern.

Input	Output
a	e
2	5
4	7
6	9
8	11

The pattern is _____

Rule: _____

7. What is the second operation that should be performed to simplify the expression below?

$$36 - 3 \times (5 + 6 \div 2)$$

a. addition
b. division
c. multiplication
d. subtraction

8. Look at the two expressions.

$$30 - (2 \times 6 + 5 \times 3)$$

$$30 - 2 \times 6 + 5 \times 3$$

Do they have the same value?
   a. Yes, both have a value of 3.
   b. No, the first expression has a value of 3 and the second expression has a value of 33.
   c. Yes, both have a value of 519.
   d. No, the first expression has a value of 3 and the second expression has a value of 519.

9. An expression is given. $3 \times (8 + 2) \div 2$. Which statement is true about the parentheses in this expression?
   a. The parentheses indicate that 8 + 2 should be solved first.
   b. The parentheses indicate that 8 + 2 should be solved last.
   c. The parentheses indicate that 2 ÷ 2 should be solved last.
   d. The parentheses indicate that 3 x 8 should be solved first.

10. What is the value of this expression?

$$[36 \times (3 \times 2)] \div 6$$

11. Which rule describes the relationship in the input/output table below?

Input	Output
1	5
4	11
7	17
10	23
13	29

a. multiply by 5
b. add 4
c. add 3
d. The output is 3 more than 2 times the input.

12. Princess Lila uses the rule $b = 4a$ to complete a table and make a graph. Which number pair will be on the graph?

a	2	3	4	5
b	8			

a. (12, 3)
b. (4,8)
c. (3,7)
d. (3,12)

13. Princess Briar Rose ordered 24 boxes of baseballs. Each box contained 16 baseballs. Princess Briar Rose used 8 of these baseballs during a game. Which equation can be used to find b, the total number of these baseballs that the Princess did not use during the game?

 a. $b = (24 + 16) - 8$
 b. $b = (24 \times 16) - 8$
 c. $b = (24 - 16) \div 8$
 d. $b = (24 \times 16) + 8$

14. The table shows the sales for Nevil's Flower Shop, along with net profits after paying expenses. What is the rule for finding the profit based on the total sales?

	Sales	Profit
May	360	120
June	480	240
July	310	70
August	500	260

a. add 240
b. multiply by 3
c. divide by 3
d. subtract 240

15. Horace had 124 sheets of colored paper.
 • She used 20 sheets to make a picture.
 • She used all the remaining sheets to make 4 posters.
 • She used the same number of sheets to make each poster.

Which equation can be used to find n, the number of sheets of colored paper Horace used to make each poster?

 a. $(124 + 20) \times 4 = n$
 b. $(124 - 20) \div 4 = n$
 c. $(124 - 20) \times 4 = n$
 d. $(124 + 20) \div 4 = n$

16. The table below shows the number of puzzles Prince Duncan completed each week. It shows the number of puzzle pieces that he used each week.

Puzzles

	Week 1	Week 2	Week 3	Week 4	Week 5
Number of Puzzles Completed	10	5	6	4	9
Number of Puzzles Pieces	500	250	300	200	450

Based on the table, the number of puzzles Prince Duncan completed each week was equal to the number of puzzle pieces that week —
   a. divided by 2
   b. divided by 50
   c. minus 250
   d. minus 5

17. The table below shows Price Gustav's's age at the end of different grade levels.

Grade Level	Age (in years)
3	9
4	10
7	13
11	17

Which statement describes the relationship between Prince Gustav's grade level and his age?
   a. Prince Gustav's age is equal to his grade level times 3.
   b. Prince Gustav's age is equal to his grade level divided by 3.
   c. Prince Gustav's age is equal to 6 less than his grade level.
   d. Prince Gustav's age is equal to 6 more than his grade level.

18. What is the value of $\frac{k}{3}$ + 23 if k =21?   answer: _____

19. Mike used a number machine. Each number he put into the machine came out as a different number according to a rule. Some examples are shown below.

Number Machine

82.05 → In   Out → 78.042

70 → In   Out → 65.992

58.208 → In   Out → 54.2

43.008 → In   Out → 39
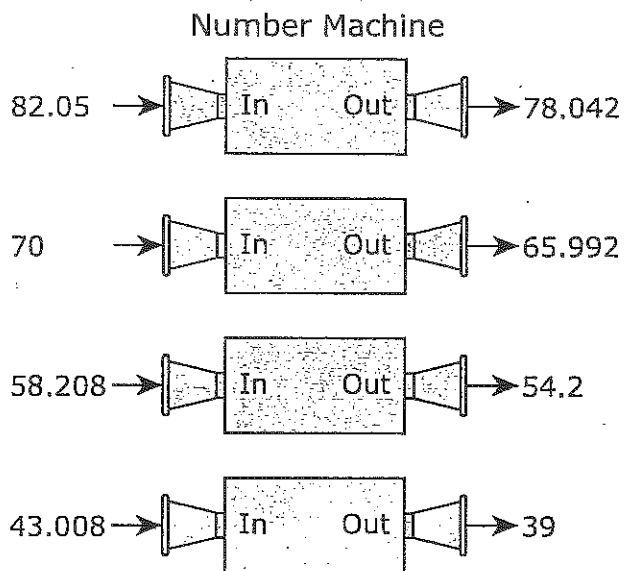
Which statement describes the relationship between the number Mike put into the machine and the number that came out of it?

a. The number that came out of the machine was 5.012 less than the number he put into it.

b. The number that came out of the machine was 4.008 less than the number he put into it.

c. The number that came out of the machine was 16.012 more than the number he put into it.

d. The number that came out of the machine was 4.008 more than the number he put into it.

20. What is the value of the expression?

20 + 5 - 6 x 5 ÷ 3