Name _____ Date ____/____/_____

Math 7 Cumulative Take Home Test #2

1. Simplify:
-1.8 + 3.4 - (-1.8) + 2.6

   a. 6

   b. -6

   c. 7.8

   d. 4.2

2. Simplify:
-5.5 - 10 + (-3.8) + 10 ½

   a. -1.2

   b. -8.8

   c. 8.8

   d. 1.2

3. Simplify the expression by combining like terms.

   7b - 3b + 4

   a. 10b + 4

   b. 8b

   c. 4b + 4

   d. -4b + 4

4. Simplify:
3(m + 8) – 10m

   a. -7m + 24

   b. 7m - 24

   c. 7m + 24

   d. -7m - 24

5. A vehicle uses $1\frac{1}{8}$ gallons of gasoline to travel $13\frac{1}{2}$ miles. At this rate, how many miles can the vehicle travel per gallon of gasoline?

   a. $\frac{16}{243}$

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

   c. 12

   d. 13

6. The equation $3(4x) = (4x)3$ illustrates which property?

1. commutative
2. associative
3. distributive
4. multiplicative inverse

7. The water level in an ocean bay changes at an average rate of 3 meters per hour. At this rate, how many hours would it take for the water level to change 12 meters?

a. $\frac{1}{4}$

b. $\frac{1}{3}$

c. 4

d. 36

8. Simplify the following expression:

(12x – 5) – (7x – 11)

a. 19x + 6

b. 5x - 6

c. 5x - 10

d. 5x + 6

9. Simplify
$\frac{-3}{4} + 1\frac{2}{3} + \frac{3}{4} + \frac{1}{3}$

a. -1.5

b. 1

c. 2

d. -1

10. Simplify:
3(m + 8) – 10m

a. -7m + 24

b. 7m - 24

c. 7m + 24

d. -7m - 24

11. The ratio of students to adults on a field trip is 8 to 1. Which table correctly shows this ratio for each grade.

a.

Grade	Number of Students	Number of Adults
6	96	88
7	120	112
8	136	128

b.

Grade	Number of Students	Number of Adults
6	96	104
7	120	128
8	136	144

c.

Grade	Number of Students	Number of Adults
6	96	12
7	120	15
8	136	17

d.

Grade	Number of Students	Number of Adults
6	96	11
7	120	13
8	136	15

12. Rosa has a goal of running a total of 100 miles this month. Each day that she ran, she ran 5 miles. Which expression could Rosa use to determine how many miles she has left to run after running for *d* days?

a. 100 - 5d

b. 5d + 100

c. $\frac{100}{5d}$

d. 5d

13. Which expression is equivalent to $\frac{3}{5}$?

a. 3×5

b. $3 + 5$

c. $3 \div 5$

d. $3 - 5$

14. Which expression represents the phrase "triple the sum of 24 and 9"?

a. $3 + (24 + 9)$

b. $3 \times (24 + 9)$

c. $3 + 24 + 9$

d. $3 \times 24 + 9$

15. What is the value of the expression below?

$\frac{1}{4} \div 8$

a. $\frac{1}{32}$

b. $\frac{1}{2}$

c. 2

d. 32

16. What is the value of $\frac{5}{6} \div \frac{3}{7}$?

a. $\frac{15}{42}$

b. $\frac{18}{35}$

c. $\frac{35}{18}$

d. $\frac{42}{15}$

17. The area of a rectangular city park is $\frac{25}{54}$ square miles. The length of the park is $\frac{5}{9}$ mile. What is the width, in miles, of the park?

a. $\frac{4}{9}$

b. $\frac{5}{6}$

c. $1\frac{1}{54}$

d. $1\frac{1}{5}$

18. Simplify the expression

2(3x - 5) + 4(-6x + 1)

a. -18x - 6

b. -18x - 14

c. 16x + 14

d. 16x - 6

19. Simplify the expression.
8x + 4(x - 1)

a. 32x + 3

b. 12x + 3

c. 12x - 4

d. 9x - 4

20. A box contains 512 grams of cereal. One serving of cereal is 56 grams. How many servings of cereal does the box contain?

a. $9\frac{1}{4}$

b. $9\frac{1}{8}$

c. $9\frac{8}{56}$

d. $9\frac{8}{512}$

21. Combine like terms to simplify:

$10\frac{1}{3}x - 1 + \frac{1}{4}x$

a. $10\frac{7}{12}x - 1$

b. $9\frac{7}{12}$

c. $9\frac{7}{12}x$

d. $10\frac{2}{7}x - 1$

22. Simplify:
-2.5 - 8 + (3.4) + 6 ½

a. -0.6

b. 0.6

c. 20.4

d. -20.4

23. A high-speed elevator can rise 480 feet in 30 seconds. Which expression represents the rate, in feet per minute, of the elevator?

a. 480×30

b. $480 \div 30$

c. 480×2

d. $480 \div 2$

24. Kira studied data collected on the school basketball team for one season. She noticed that a player on the team had 13 successful free throws out of a total of 20 attempted free throws. To find the percentage of the total free throws attempted by this player that were successful, Kira set up the equivalent ratios below.

$$\frac{13}{20} = \frac{m}{n}$$

What are the values for m and n in Kira's equation?

a. $m = 65$
$n = 1$

b. $m = 100$
$n = 65$

c. $m = 93$
$n = 100$

d. $m = 65$
$n = 100$

25. A bakery sells 5 apple muffins for every 2 bran muffins sold. Which table shows this ratio?

a.

Apple	Bran
5	2
10	12
20	22

b.

Apple	Bran
10	4
15	6
35	14

c.

Apple	Bran
5	2
18	8
20	10

d.

Apple	Bran
20	4
30	6
40	8

26. Christopher wants to buy a notebook for $2.15, a pack of glue sticks for $5.08, and a pack of pens for $3.08. What is the total cost of the three items Christopher wants to buy?

a. $10.75

b. $10.31

c. $10.23

d. $10.11

27. Which expression represents the sum of $(2x-5y)$ and $(x+y)$?

a. $3x-4y$
b. $3x-6y$
c. $x-4y$
d. $x-6y$

28. Which expression is equivalent to $8x-2y+x+x$?

a. $4x$
b. $8x$
c. $6x-2y$
d. $10x-2y$

29. Which expression is equivalent to $5(d+1)$?

a. $5d+5$
b. $5d+1$
c. $d+5$
d. $d+6$

30. What is the value of $\frac{2}{5}+\frac{3}{7}$?

a. $\frac{6}{35}$
b. $\frac{5}{12}$
c. $\frac{6}{12}$
d. $\frac{29}{35}$

31. Deb has a board that measures 5 feet in length. How many $\frac{1}{4}$ -foot-long pieces can Deb cut from the board?

a. 1
b. 9
c. 10
d. 20

32. Mani, James, and Isidro equally shared $\frac{1}{2}$ of a pie. Which fraction of the whole pie did each of them receive?

a. $\frac{1}{6}$
b. $\frac{1}{5}$
c. $\frac{2}{3}$
d. $\frac{3}{2}$

33. The statement $2 + 0 = 2$ is an example of the use of which property of real numbers?

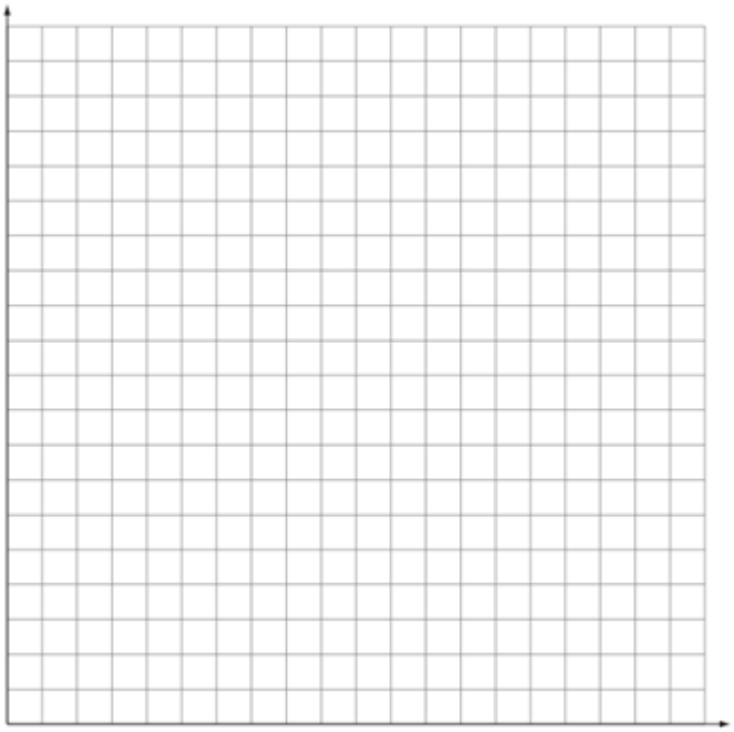
1. associative
2. additive identity
3. additive inverse
4. distributive

34. The most common women's shoe size in the U.S. is reported to be an 8 ½. A shoe store uses a table like the one below to decide how many pairs of size 8 ½ shoes to buy when they place a shoe order from the shoe makers.

Total number of pairs of shoes being ordered	Number of pairs of size 8 ½ to order
50	8
100	16
150	24
200	32

a. What is the ratio of the number of pairs of size 8 ½ shoes they order to the total number of pairs of shoes being ordered?

b. Plot the values from the table on a coordinate plane, and draw a straight line through the points. Label the axes. Then use the graph to find the number of pairs of size 8 ½ shoes they order for a total order of 125 pairs of shoes.



35. Bella has 6.3 kilograms of berries. She packs 0.35 kilogram of berries into each container. She then sells each container for $2.99. How much money will Bella earn if she sells all the containers?

Show your work.

Answer $_____

36. Julia is learning about elevation in math class. She decided to research some facts about New York State to better understand the concept. Here are some facts that she found.

- Mount Marcy is the highest point in New York State. It is 5.343 feet above sea level.
- Lake Erie is 210 feet below sea level.
- The elevation of Niagara Falls, NY is 614 feet above sea level.
- The lobby of the Empire State Building is 50 feet above sea level.
- New York State borders the Atlantic Coast, which is at sea level.
- The lowest point of Cayuga Lake is 435 feet below sea level.

a. Write an integer that represents each location in relationship to sea level.

Mount Marcy _____

Lake Erie _____

Niagara Falls, NY _____

Empire State Building _____

Atlantic Coast _____

Cayuga Lake _____

b. Explain what negative and positive numbers tell Julia about elevation.

c. Order the elevations from least to greatest, and then state their absolute values. Use the chart below to record your work.

Elevations	Absolute Values of Elevations

d. Circle the row in the table that represents sea level. Describe how the order of the elevations below sea level compares to the order of their absolute values. Describe how the order of the elevations above sea level compares to the order of their absolute

values.

37. Yasmine is serving ice cream with the birthday cake at her party. She has purchased $19\frac{1}{2}$ pints of ice cream. She will serve $\frac{3}{4}$ of a pint to each guest.

a. How many guests can be served ice cream?

b. Will there be any ice cream left? Justify your answer.