

Homework 1/2/2020

Name: _____

Date: _____

1. Which sentence is an example of the distributive property?

A. $ab = ba$

B. $a(bc) = (ab)c$

C. $a(b + c) = ab + ac$

D. $a \cdot 1 = a$

2. The sentence $3 + (5 + 2) = (5 + 2) + 3$ illustrates

A. the commutative property of addition

B. the associative property of addition

C. the distributive property of multiplication over addition

D. the additive identity element

3. Which property is illustrated by the equation $3x - 6y = 3(x - 2y)$?

A. associative

B. commutative

C. distributive

D. closure

4. Which property is demonstrated by the following equation?

$$a(b + c) = ab + ac$$

A. associative property of addition

B. distributive property

C. commutative property of addition

D. identity property of addition

5. Which is an illustration of the associative property?

A. $a \cdot b = b \cdot a$

B. $a \cdot (b \cdot c) = (b \cdot c) \cdot a$

C. $a \cdot b = a$

D. $a \cdot (b \cdot c) = (a \cdot b) \cdot c$

6. Tori computes the value of 8×95 in her head by thinking $8(100 - 5) = 8 \times 100 - 8 \times 5$. Which number property is she using?

A. associative

B. distributive

C. commutative

D. closure

7. The additive inverse of $a - b$ is

A. $a + b$

B. $-a + b$

C. $-a - b$

D. $\frac{1}{a - b}$

8. What is the additive inverse of $3t$?

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

B. $-3t$

C. $-\frac{3}{t}$

D. $-\frac{1}{3t}$

9. Which equation illustrates the additive inverse property?

A. $a + (-a) = 0$

B. $a + 0 = a$

C. $a \div (-a) = -1$

D. $a \cdot \frac{1}{a} = 1$

10. What is the additive inverse of $\frac{2}{3}$?

A. $-\frac{2}{3}$

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

C. $-\frac{3}{2}$

D. $\frac{3}{2}$

11. The additive inverse of $\frac{1}{a}$ is

A. $-\frac{1}{a}$

B. $-a$

C. 0

D. a

12. What is the multiplicative inverse of $\frac{x}{2}$?

A. 1

B. $\frac{2}{x}$

C. $-\frac{x}{2}$

D. $2x$

13. What is the multiplicative inverse of $-\frac{5}{6}$?

A. 1

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

C. $-\frac{6}{5}$

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

14. Which equation illustrates the multiplicative inverse property?

A. $1 \cdot x = x$

B. $x \cdot \frac{1}{x} = 1$

C. $1 \cdot 0 = 0$

D. $-1 \cdot x = -x$

15. What is the solution set of the equation $|3 - 2x| = 5$?

A. $\{-1, 4\}$

B. $\{1, -4\}$

C. $\{-1\}$

D. $\{4\}$

16. What is the solution set of the equation $|2x - 1| = 9$?

A. $\{\}$

B. $\{5, -4\}$

C. $\{-5, 4\}$

D. $\{5\}$

17. What is the solution set for the equation $2x - |x + 3| = 9$?

A. $\{12\}$

B. $\{2\}$

C. $\{2, 12\}$

D. $\{\}$

18. The smallest whole number that satisfies the inequality $3x - 1 > 2$ is

A. 1

B. 2

C. 3

D. 0

19. If x is a positive integer, then the solution set of $4x + 2 < 14$ is

A. $\{1\}$

B. $\{1, 2\}$

C. $\{1, 2, 3\}$

D. $\{1, 2, 3, 4\}$

20. Which inequality is the solution of $5x - 1 < 29$?

A. $x > 7$

B. $x < 7\frac{1}{4}$

C. $x < 6$

D. $x > 5\frac{3}{5}$

21. The inequality $2x > x + 7$ is equivalent to

A. $x > 7$

B. $x < 7$

C. $x = 7$

D. $x > \frac{7}{3}$

22. Mario paid \$44.25 in taxi fare from the hotel to the airport. The cab charged \$2.25 for the first mile plus \$3.50 for each additional mile. How many miles was it from the hotel to the airport?

A. 10

B. 11

C. 12

D. 13

23. Robin spent \$17 at an amusement park for admission and rides. If she paid \$5 for admission, and rides cost \$3 each, what is the total number of rides that she went on?

A. 12

B. 2

C. 9

D. 4

24. What is the speed, in meters per second, of a paper airplane that flies 24 meters in 6 seconds?

A. 144

B. 30

C. 18

D. 4

25. It takes Tammy 45 minutes to ride her bike 5 miles. At this rate, how long will it take her to ride 8 miles?

A. 0.89 hour

B. 1.125 hours

C. 48 minutes

D. 72 minutes