

_____ 1. What is the value of x in the following equation: $x - 13 = 5$

- A. 8
 - B. 14
 - C. 18
 - D. 21
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_____ 2. If $5n + 1 = 13$, what is the value of n ?

- A. $5/14$
 - B. $5/12$
 - C. $12/5$
 - D. $14/5$
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_____ 3. If $8y - 5 = 6$, what is the value of y ?

- A. $\frac{5}{8}$
 - B. $\frac{8}{11}$
 - C. $\frac{11}{8}$
 - D. $\frac{8}{5}$
-

_____ 4. If $4a + 2b - 3 - (2b + 6) = 12 + a$, what is the value of a ?

- A. 3
- B. 7
- C. 12
- D. 15

_____ 5. If $5d - 5 = 3d$, then $14d =$

- A. 5
 - B. 14
 - C. 35
 - D. 42
-

_____ 6. If $7k - 2 = 3k$, then $22k =$

- A. 5
 - B. 7
 - C. 11
 - D. 20
-

_____ 7. Which equation correctly represents the statement:

Eight subtracted from twice an unknown number is equivalent to sixteen.

- A. $2x - 8 = 16$
 - B. $2(x - 8) = 16$
 - C. $8 - 2x = 16$
 - D. $8(2 - x) = 16$
-

_____ 8. There are exactly 30 pencils in a pouch. If x pencils are removed, which of the following expressions represents the number of pencils left in the pouch?

- A. $\frac{30}{x}$
- B. $30x$
- C. $x - 30$
- D. $30 - x$

_____9. A bike rental company charges \$2 to rent a bike plus an additional \$0.67 per minute the bike is rented. Which expression represents the cost, in dollars, for renting a bike for x minutes?

- A. $2 + 0.67 + x$
 - B. $2 + \frac{0.67}{x}$
 - C. $2x + 0.67x$
 - D. $2 + 0.67x$
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_____10. The sum of 3 consecutive even integers is 198. Which equation can be used to find the first number?

- A. $x + (x + 2) + (x + 4) = 198$
 - B. $x + (x + 1) + (x + 2) = 198$
 - C. $3x = 198$
 - D. $\frac{(x+1)}{3} + \frac{(x+3)}{3} + \frac{(x+5)}{3} = 198$
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_____11. If p is the least of two consecutive even integers, which of the following represents the sum of the two integers?

- A. $p + 1$
 - B. $p + 2$
 - C. $2p + 1$
 - D. $2p + 2$
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_____12. Last year, a bakery sold c cupcakes. This year, the bakery sold three more than twice the number of cupcakes sold last year. If next year the bakery plans on selling twice the number of cupcakes sold this year, how many cupcakes does the bakery expect to sell next year?

- A. $2c$
- B. $2c + 3$
- C. $4c + 3$
- D. $4c + 6$

_____13. The sum of b and the product 4 times b is 20. What is the value of b ?

- A. 2
 - B. 3
 - C. 4
 - D. 5.5
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_____14. The profit formula below is for a company's new product, where n is the number of objects sold and P is the profit, in dollars. How much profit was made on the sale of 21,000 objects?

$$P = \frac{3}{7}n - 300$$

- A. \$8,700
 - B. \$9,200
 - C. \$13,750
 - D. \$18,800
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_____15. In the equation below, T represents the boiling point of water in degrees Fahrenheit, and h represents the height above sea level in feet. If $T = 208^\circ F$, what is the value of h ?

$$T = 212 - \frac{h}{550}$$

- A. 650 ft
 - B. 1,500 ft
 - C. 2,200 ft
 - D. 3,700 ft
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_____16. A rectangle of length l and width w has perimeter $p = 2l + 2w$. What is the width of the rectangle in terms of p and l ?

- A. $\frac{p}{2} - \frac{l}{2}$
- B. $\frac{p}{2} - l$
- C. $p - \frac{l}{2}$
- D. $p - 2l$

_____ 17. If $x + y = 15$ and $x = 4y$, then $x = ?$

- A. 2
 - B. 3
 - C. 4
 - D. 12
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_____ 18. What are the coordinates of the point of intersection of $y = x + 5$ and $y = 3x - 5$?

- A. (0 , 5)
 - B. (3 , 8)
 - C. (5 , 10)
 - D. (10 , 15)
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_____ 19. Jack bought 4 books. Kam bought 5 books and a \$16.00 binder. Together, Jack and Kam spent \$43.00. If each book cost the same amount, how much did each book cost?

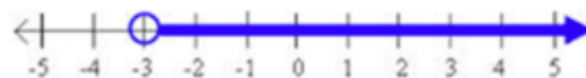
- A. \$2.00
 - B. \$2.50
 - C. \$3.00
 - D. \$5.00
-

_____ 20. Mark bought 7 sandwiches from a deli. Some of the sandwiches cost \$3, and the rest cost \$4 each. If he paid a total of \$23 for the sandwiches, how many of the \$3 sandwiches did he buy?

- A. 2
 - B. 3
 - C. 4
 - D. 5
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_____ 21. Which inequality can be used to represent the solutions given by the number line graph:

- A. $x > -3$
- B. $x < -3$
- C. $x \geq -3$
- D. $x \leq -3$



_____ 22. Which inequality represents the situation: "The temperature should be at most 80 degrees."

- A. $t > 80$
 - B. $t < 80$
 - C. $t \leq 80$
 - D. $t \geq 80$
-

_____ 23. Solve for x : $-2x - 5 > -9$

- A. $x < 2$
 - B. $x > 2$
 - C. $x < 7$
 - D. $x > 7$
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The last 2 problems may require steps we have not used yet. Use your creativity to solve the problems. 😊

_____ 24. If $\sqrt{x + 3} = 12$, what is the value of x ?

- A. 253
 - B. 141
 - C. 81
 - D. 9
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_____ 25. If $\frac{x}{8} - \frac{x}{4} = 2$, then $x =$

- A. -16
- B. -8
- C. 4
- D. 16