Algebra I Summer Packet Part II

Name: _____ **Date:** _____

1. Simplify the expression $2x(5 + y)$.

   A. $7x + y$ B. $7x + 2xy$

   C. $10x + y$ D. $10x + 2xy$

2. For what value of x will $3x + 4 = x - 6$ be a true statement?

   A. $x = -5$ B. $x = -\frac{5}{2}$

   C. $x = -1$ D. $x = -\frac{1}{2}$

3. Simplify: $6(2x + 3y) + 3(x - y)$

   A. $9x$ B. $12x - 13y$

   C. $15x + 15y$ D. $12x + 15y$

4. Simplify: $6b + 4a + 3a - 2b$

   A. $4b + 7a$ B. $11ab$

   C. $9a - 2b$ D. $10a + b$

5. If $t = 11$ and $s = 5$, evaluate the following expression: $3t - 5s$

   A. 8 B. 4 C. -11 D. 23

6. What is the value of the expression $0.05x + 0.10y + 0.25z$ when $x = 2$, $y = 3$, and $z = 4$?

   A. 1.00 B. 1.40 C. 3.60 D. 9.40

7. Solve each of the unknowns in the equations below:

   $x - 76 = 102$

   A. 26 B. 34 C. 36 D. 178

8. Which value for R makes the number sentence below true?

   $R \div 14 = 32$

   A. 8 B. 13 C. 56 D. 448

9. What value of r makes $\frac{r}{-11} = -3$ true?

A. -33 B. -8 C. 8 D. 33

10. Solve this equation, show your work, and choose the best answer: $5x + 8 = 18$

A. $x = 2$ B. $x = 5\frac{1}{5}$

C. $x = 5$ D. $x = \frac{1}{2}$

11. Solve: $4(6x - 10) = 8x + 40$

A. 0 B. $\frac{5}{2}$ C. $\frac{25}{8}$ D. 5

12. Solve for x.

$3x + 7 = 2x$.

A. $x = \frac{5}{7}$ B. $x = -\frac{5}{7}$

C. $x = -7$ D. $x = 7$

13. What is the solution to the inequality $x - 5 > 14$?

A. $x > 9$ B. $x > 19$

C. $x < 9$ D. $x < 19$

14. Look at the inequality below.

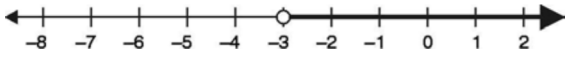
$-2x \leq 6$

Which of these *best* describes the solution of this inequality?

A. $x \geq -3$ B. $x \leq -3$

C. $x \geq 3$ D. $x \leq 3$

15. Use the line graph below to answer the question that follows.

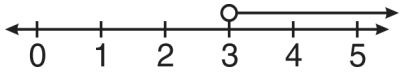


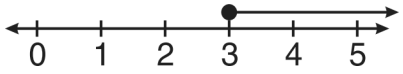
What is the solution set of the graph above?

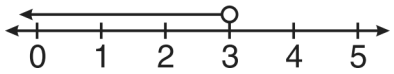
A. $x < -3$ B. $x \leq -3$

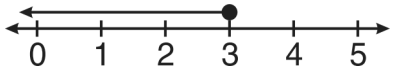
C. $x > -3$ D. $x^3 - 3$

16. Which graph represents $x \geq 3$?

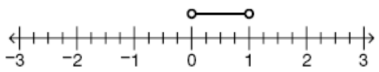
A. 

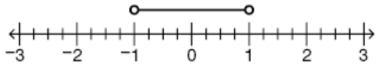
B. 

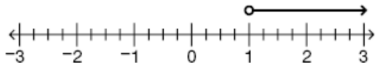
C. 

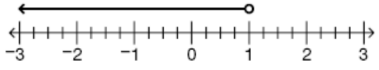
D. 

17. The average high temperature on the first day of January in Don's hometown in Canada is 1 degree Fahrenheit. This year, the high temperature on the first day of January was less than 1 degree Fahrenheit. Which number line shows all the possible temperatures it could have been that day?

A. 

B. 

C. 

D. 

18. The lengths of the sides of a triangle are y, $y + 1$, and 7 centimeters. If the perimeter is 56 centimeters, what is the value of y?

A. 24 B. 25 C. 31 D. 32

19. 

The length of the rectangle above is 6 units longer than the width. Which expression could be used to represent the area of the rectangle?

A. $x^2 + 6x$ B. $x^2 - 36$

C. $x^2 + 6x + 6$ D. $x^2 + 12x + 36$

20. Which list is given in order from least to greatest?

A. 001, .292, .034, .010

B. 2.0, 0.303, 4.57, 56.7

C. $\frac{3}{4}, \frac{7}{8}, \frac{12}{28}, \frac{17}{100}$

D. $\frac{1}{10}, \frac{3}{8}, \frac{1}{2}, \frac{7}{8}$