

**Study Guide - Unit 2 Post Test
Expressions and Equations**

1. What phrase represents the expression: $5y + 10$?
2. What expression is equal to: $4a + 9b + 2a - 10b$?
3. What is the value of x : $3(x + 3) = 33$?
4. What is the solution to the inequality: $-4x > 36$?
5. What is the solution to the inequality: $2x + 14 \geq 30$?
6. What is the value of y in the following equation? $3 + 9y = 48$
7. Simplify: $5 + 2(3x + 4) - 3x$

8. What is the solution to the inequality: $a - 9 > -22$?

9. What is the solution for the equation: $8x - 2 = 62$?

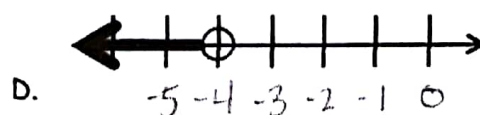
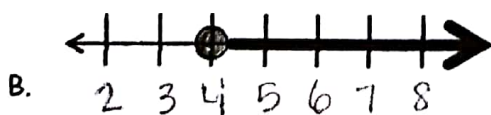
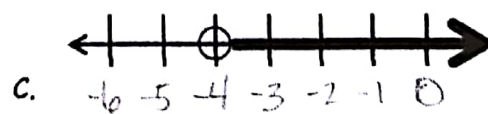
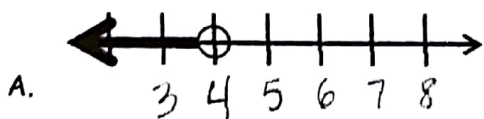
10. To ride the Dragon roller coaster at Adventure Park, one must be taller than 48 inches. Write an inequality to represent h , the required height to ride the roller coaster.

11. Translate the following statement into an algebraic equation and solve.
Three more than four times a number is fifteen. What is the number?

12. Translate the following statement into an algebraic equation:
The quotient of nine and x is equal to eighteen.

13. Jacob spent \$18.50 of his \$40 game store gift card last week. This week he wants to use the rest of the balance to buy more games. If the games cost \$4.25 each, how many more games can he buy?

14. Which of the following shows the solution to: $-4x + 3 \leq -13$?



15. Solve: $7.5x - 3 = 22.5$

16. Charlie paid a mechanic y dollars per hour for a 6 hour job plus \$177.00 for parts for his car. The total charge was \$885. Write the equation that can be used to determine how much the mechanic charged per hour to fix the car.

17. Which expression is NOT equivalent to the other three?

- a. $-6x - 18$ b. $-4x - 18 - 2x$ c. $-6(x + 3)$ d. $-6x + 18$

18. Solve for b : $10 = b/8 + 5$

19. Write a simplified expression that represents the PERIMETER of the figure.

20. Write a simplified expression that represents the AREA of the above figure.

