

College Algebra Quiz 1b Solution

Name _____ Score _____

Please Print Clearly

Circle the correct response

1. **T** F If both sides of an equation are multiplied by non-zero real number, the resulting equation is equivalent to the original equation
2. **T** F If a non-zero real number is added to both sides of an equation, the resulting equation is equivalent to the original equation.
3. **T** F If $3x + 7$ is added to both sides of an equation, the resulting equation is equivalent to the original equation.
4. **T** F If two equations have the same solution set they are equivalent equations.

Fill in the blanks to correctly complete the following statements.

5. The **graph** of an equation consists of all the points, and only those points, which satisfy the equation.
5. Two equations are **equivalent** if they have the same solution set.
6. A **linear** equation in one variable is an equation that can be written in the form $ax + b = 0$ where a and b are real numbers with a not zero.
7. To find the y-intercepts of the graph of an equation, set x equal to 0 and solve for y .
8. The volume of a right circular cone with radius r and height h is given by $V = \frac{1}{3}\pi r^2 h$
9. Describe the graph of the equation $(x - 3)^2 + y^2 = 49$

The graph of the equation $(x - 3)^2 + y^2 = 49$ is the circle with center at $(3, 0)$ and radius 7.

10. Solve the equation $A = \frac{1}{2}(b_1 + b_2)h$ for h .

Solution: Begin with the equation $A = \frac{1}{2}(b_1 + b_2)h$

Multiply both sides of the equation by 2 to obtain $2A = (b_1 + b_2)h$

Multiply both sides by the reciprocal of $(b_1 + b_2)$ to obtain $\frac{2A}{b_1 + b_2} = h$