

NAME: \_\_\_\_\_ Score \_\_\_\_\_/10

Please **print** your name**SHOW ALL YOUR WORK IN A NEAT AND ORGANIZED FASHION**

1. (1 pt.) If two expressions represent the same quantity, those two expressions are \_\_\_\_\_.
2. (1 pt.) A \_\_\_\_\_ equation in \_\_\_\_\_ variable is an equation that can be written in the form  $ax + b = 0$  where  $a$  and  $b$  are real numbers with  $a \neq 0$ .
3. (1 pt.) Two equations are \_\_\_\_\_ if they have the same solution sets.
4. (1 pt.) T      F      A linear equation in one variable can have exactly two solutions.
5. (1 pt.) T      F      The solution set for a linear equation in one variable can be the null set.
6. (1 pt.) If both sides of an equation are multiplied by the same \_\_\_\_\_, the resulting equation is equivalent to the original equation.
7. (2 pt.) Observe that 1 is a solution for the equation  $x^3 - x^2 + x - 1 = 0$ . Is that enough information to decide that the solution set for the equation  $x^3 - x^2 + x - 1 = 0$  is  $\{1\}$ ?  
**Explain your answer**

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8. (2 pt.) A rectangle whose width is 5 ft. less than its length has a perimeter of 90 ft. What is the area of the rectangle?

**Show your work. Completely and neatly. Write sentences.**