

NAME: \_\_\_\_\_ Score \_\_\_\_\_/10  
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**SHOW ALL YOUR WORK IN A NEAT AND ORGANIZED FASHION**

1. T F  $3x + 5y$  is an equation.
2. T F Two equations are equal if they have the same solution set.
3. A **linear equation in one variable** is an equation that can be written in the form \_\_\_\_\_ where  $a$  and  $b$  are real numbers with  $a$  not zero.
4. Show that 2 is a solution of  $x^3 - 3x - 2x^2 + 6 = 0$ . (Hint: Do not try to solve the equation)
5. Compute the sum  $(3 - 2i) + (-1 + 5i) =$
6. Write the equation of the circle of radius 2 with center at  $(3, -5)$ .
7. Write the formula for the volume of a cylinder with radius  $r$  and height 7.
8. Write the property of equations which assures us that  $3x^5 + 2 = x^4$  and  $3x^5 - x^4 + 2 = 0$  are equivalent equations.
9. State the Zero Factor Property