

NAME: _____ Score _____/10

Please **print** your name**Consider the following problem.**

1. A linear equation in one variable is an equation which may be written in the form $ax + b = 0$ where a and b are real numbers.
2. A quadratic equation in one variable is an equation which may be written in the form $ax^2 + bx + c = 0$ where a , b , and c are real numbers and $a \neq 0$.
3. The graph of an equation is the set of points, and only those points, whose coordinates are **solutions** of the equation.
4. A number is a solution of an equation in one variable if and only if it makes the equation **true** when substituted for the variable.
5. Explain why $x^2 + 5x + 2$ is not a quadratic equation in one variable.

$x^2 + 5x + 2$ does not contain an $=$ symbol, so it isn't even an equation. So it certainly is not a quadratic equation.

6. State the quadratic formula.

Solutions of the quadratic equation $ax^2 + bx + c = 0$ are given by $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

7. State the Zero Factor Property

If a and b are real numbers such that $ab = 0$, then $a = 0$ or $b = 0$.