

### SM3 Properties 2-3 (Intercept Form Quadratic Equation)

From Elementary School: Zero multiplied by any number equals zero

The Zero Product Property: If two numbers are multiplied together and the product equals zero, then one or both of the factors must equal zero.

$$A * B = 0 \quad \rightarrow \text{either } A = 0 \text{ or } B = 0 \text{ or both A and B equal zero.}$$

$$0 = (x + 6)(x - 1) \quad \rightarrow \text{Zero Product Property: either } x + 6 = 0 \text{ or } x - 1 = 0$$
$$0 = A * B$$

The Zero Product Property is always used when finding zeroes of intercept form quadratic equations.

**NEVER** just think "it's just the opposite sign of the number."

$$0 = (5x + 6)(2x - 1) \quad \rightarrow \text{Zero Product Property: either } 5x + 6 = 0 \text{ or } 2x - 1 = 0$$
$$0 = A * B$$