

- Need to know how to factor polynomials
- Only works when you CAN factor - otherwise use quadratic formula
- Based on zero-product property

Example $x^2 - 9x + 8 = 0$ ← Factor first

$$(\underline{x-1})(\underline{x-8}) = 0$$

↙ ↘

Zero product property { One of these terms must be zero, because that's the only way you can the equation (left side) can be equal to zero (right side)

Solve by setting both factors equal to zero

$$x - 1 = 0$$

$$\textcircled{x = 1}$$

$$x - 8 = 0$$

$$\textcircled{x = 8} \leftarrow \text{solutions}$$