

Name _____

Date _____

Identifying Zeros of Polynomials - Guided Lesson Explanation

Remember that the Zero Product Property states that for all real numbers a and b :

If $ab = 0$, then $a = 0$ or $b = 0$

Explanation #1

According to the Zero Product Property, if $(q + 4)(q - 9) = 0$, then $(q + 4)$ must be 0 or $(q - 9)$ must be 0. Now we will write two equations and solve q .

$$q + 4 = 0 \quad \text{or} \quad q - 9 = 0$$

$$q = -4 \quad \text{or} \quad q = 9$$

Explanation #2

According to the Zero Product Property, if $(t + 3)(t - 7) = 0$, then $(t + 3)$ must be 0 or $(t - 7)$ must be 0. Now we will write two equations and solve t .

$$t + 3 = 0 \quad \text{or} \quad t - 7 = 0$$

$$t = -3 \quad \text{or} \quad t = 7$$

Explanation #3

According to the Zero Product Property, if $(z - 5)(z - 2) = 0$, then $(z - 5)$ must be 0 or $(z - 2)$ must be 0. Now we will write two equations and solve z .

$$z - 5 = 0 \quad \text{or} \quad z - 2 = 0$$

$$z = 5 \quad \text{or} \quad z = 2$$

