

Zero Product Property WS

- 1) What does the Zero Product Property say? - when you multiply two or more things together to get 0, at least one of those things must equal zero.
How can we use it to solve equations that have been factored? - set each factor equal to zero and solve for the variable.

Solve using the Zero Product Property. Give your answers as integers or as reduced fractions (no decimals).

2) $(x + 4)(x - 7) = 0$

$$\begin{array}{r} x+4=0 \\ -4 \quad -4 \end{array} \quad \begin{array}{r} x-7=0 \\ +7 \quad +7 \end{array}$$

$$x = -4, x = 7$$

3) $(8a - 7)(8a + 5) = 0$

$$\begin{array}{r} 8a-7=0 \\ +7 \quad +7 \end{array} \quad \begin{array}{r} 8a+5=0 \\ -5 \quad -5 \end{array}$$

$$\frac{8a}{8} = \frac{7}{8} \quad \frac{8a}{8} = \frac{-5}{8}$$

$$a = \frac{7}{8}, a = -\frac{5}{8}$$

4) $(7n - 1)(3n + 1) = 0$

$$n = \frac{1}{7}, n = -\frac{1}{3}$$

5) $(m + 6)(7m + 1) = 0$

$$m = -6, m = -\frac{1}{7}$$

6) $(b - 5)(b + 6) = 0$

$$b = 5, b = -6$$

7) $(b + 1)(b - 4) = 0$

$$b = -1, b = 4$$

8) $(x + 2)(x + 4) = 0$

$$x = -2, x = -4$$

9) $(x - 6)(4x + 1) = 0$

$$x = 6, x = -\frac{1}{4}$$

10) $(6p + 7)(p + 8) = 0$

$$p = -\frac{7}{6}, p = -8$$

11) $(b + 8)(b - 3) = 0$

$$b = -8, b = 3$$