

Chapter 4 - Factoring Day 3 Wks

Example 1

Solve the following:

$$\begin{array}{l} x - 4 = 0 \\ +4 \quad +4 \\ \hline x = 4 \end{array}$$

$$3x + 2 = 0$$

$$\begin{array}{l} 3x = -2 \\ \hline x = -\frac{2}{3} \end{array}$$

Chapter 4 - Factoring Day 3 Wks

Example 2

Zero Product Property

$$a * b = 0$$

\swarrow \searrow
 $a = 0$ $b = 0$

Solve using the Zero Product Property

$$xy = 0$$

\swarrow \searrow
 $x = 0$ $y = 0$

$$(x-2)(x+3) = 0$$

$\underbrace{\hspace{1.5cm}}_a \quad \underbrace{\hspace{1.5cm}}_b$

$$x-2=0$$

$$x=2$$

$$x+3=0$$

$$x=-3$$

$$(2x-3)(4x+1) = 0$$

$$2x-3=0$$

$$x = \frac{3}{2}$$

$$4x+1=0$$

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

Chapter 4 - Factoring Day 3 Wks

Example 3

Solve by Factoring

5. $x^2 + 4x + 3 = 0$

$$(x+3)(x+1) = 0$$

$x+3=0$

$x = -3$

$x+1=0$

$x = -1$

$x = -3, -1$

9. $x^2 + 10x + 16 = 0$

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

$x+8=0$

$x+2=0$

$x = -8, -2$

Chapter 4 - Factoring Day 3 Wks

Example 3

Solve by Factoring

10. $x^2 - 4 = 0$

$$x^2 + 0x - 4 = 0$$

-2 2

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

$x=2$ $x=-2$

14. $9x^2 + x = 0$

$$x \cdot (9x+1) = 0$$

$x=0$ $9x+1=0$

$$x = -\frac{1}{9}$$

Chapter 4 - Factoring Day 3 Wks

Example 3

Solve by Factoring

16. $9x^2 + 18x + 9 = 0$

$$9(x^2 + 2x + 1) = 0$$

$$9(x+1)(x+1) = 0$$

~~9~~ $x+1=0$ $x+1=0$

$$x = -1$$

19. $6x^2 - 11x - 10 = 0$

$$AC = -60$$

6	-10
5	-12
4	-15

$$6x^2 + 4x - 15x - 10 = 0$$

$$2x(3x+2) - 5(3x+2) = 0$$

$$(3x+2)(2x-5) = 0$$

$$3x+2=0 \quad 2x-5=0$$

$$x = -\frac{2}{3} \quad x = \frac{5}{2}$$