

Solve each equation by factoring.

12) $6x^2 + 30 = -28x$

$$SS = \{-3, -\frac{5}{3}\} \quad \text{either } x+3=0 \text{ or } 3x+5=0$$

$$x = -3 \quad \text{or} \quad \frac{3x}{3} = \frac{-5}{3}$$

$$\frac{6x^2}{2} + \frac{28x}{2} + \frac{30}{2} = 0$$

$$\times \begin{pmatrix} 45 \\ 14 \end{pmatrix}$$

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

$$2(3x^2 + 14x + 15) = 0$$

$$5, 9$$

$$2(3x^2 + 9x + 5x + 15) = 0$$

$$2[3x(x+3) + 5(x+3)]$$

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