

Factor

$$x^2 - 12x + 32$$

$$\begin{array}{r} 32 \\ 1 \cdot 32 \\ 2 \cdot 16 \\ \hline -4 \cdot 8 \end{array}$$

$$(x-4)(x-8)$$

Find the GCF. Then factor completely.

$$5x^2 + 25x - 70$$

$$5(x^2 + 5x - 14) \quad \begin{array}{r} 1 \cdot 14 \\ -2 \cdot 7 \end{array}$$

$$5(x-2)(x+7)$$

Factor.

$$5x^2 - 17x + 6$$

$$a \cdot c = 5 \cdot 6 \quad \begin{array}{r} 30 \\ 1 \cdot 30 \\ 2 \cdot 15 \\ 3 \cdot 10 \\ 5 \cdot 6 \end{array}$$

$$\underline{5x^2 - 15x} \quad \underline{-2x + 6}$$

$$5x(x-3) - 2(x-3)$$

$$(x-3)(5x-2)$$

$$3x^2 + 10x + 8$$

$$\begin{array}{r} 24 \\ 1 \cdot 24 \\ \hline \cancel{-2 \cdot 12} \rightarrow -24 \\ 3 \cdot 8 \\ \hline 4 \cdot 6 \rightarrow 10 \end{array}$$

$$\underline{3x^2 + 4x} \quad \underline{6x + 8}$$

$$x(3x+4) + 2(3x+4)$$

$$(3x+4)(x+2)$$

$$2b^2 - 9b - 5 \quad \frac{-10}{1 \cdot 10}$$

$$2b^2 - 10b + 1b - 5$$

$$2b(b-5) + 1(b-5)$$

$$(b-5)(2b+1)$$

$$2x^2 + 9x + 10 \quad 2 \cdot 10 = \frac{20}{45}$$

$$2x^2 + 4x + 5x + 10$$

$$2x(x+2) + 5(x+2)$$

$$(x+2)(2x+5)$$

$$12t^2 + 10t - 12 = 2(6t^2 + 5t - 6) \quad \begin{matrix} 36 \\ 1 \cdot 36 \\ 2 \cdot 18 \\ 3 \cdot 12 \\ 4 \cdot 9 \\ 6 \cdot 6 \end{matrix}$$

$$2 \left[\frac{6t^2}{2t} - \frac{4t}{2t} + \frac{9t}{3} - \frac{6}{3} \right]$$

$$2 [2t(3t-2) + 3(3t-2)]$$

$$2(3t-2)(2t+3)$$

$$z^2 + 12z + 36$$

$$(z+6)^2$$

$$9x^2 - 6x + 1$$

$$(3x-1)^2$$

$$4k^2 + 12k + 9$$

$$(2k+3)^2$$

$$16x^2 - 40x + 25$$

$$(4x-5)^2$$

$$m^2 - 49$$

$$(m+7)(m-7)$$

