

Name: Key



Unit 7 - Factoring

Quiz Study Guide

Factor out a GCF.

$$1. \frac{2x}{2} + \frac{18}{2}$$

$$2(x+9)$$

$$2. \frac{24n^2}{8} + \frac{56n}{8} + \frac{72}{8}$$

$$8(3n^2 + 7n + 9)$$

$$3. \frac{-3n^3}{-3n^2} + \frac{3n^2}{-3n^2}$$

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

$$4. \frac{-5x^4}{-5} - \frac{25x}{-5} - \frac{25}{-5}$$

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

Factor. REMEMBER to Factor out a GCF first if you can.

$$5. m^2 + 7m + 10 \text{ NO GCF}$$

$$\begin{array}{r} (m+2)(m+5) \\ \quad \quad \quad \cup \\ \quad \quad \quad 2m \\ \quad \quad \quad + 5m \\ \quad \quad \quad \hline \quad \quad \quad 7m \end{array}$$

$$6. k^2 + 3k - 70 \text{ NO GCF}$$

$$\begin{array}{r} (k+10)(k-7) \\ \quad \quad \quad \cup \\ \quad \quad \quad 10k \\ \quad \quad \quad -7k \\ \quad \quad \quad \hline \quad \quad \quad 3k \end{array}$$

$$7. \frac{4x^2}{2} - \frac{38x}{2} + \frac{90}{2}$$

$$2(2x^2 - 19x + 45)$$

$$\begin{array}{r} 2(2x-9)(x-5) \\ \quad \quad \quad \cup \\ \quad \quad \quad -9x \\ \quad \quad \quad -10x \\ \quad \quad \quad \hline \quad \quad \quad -19x \end{array}$$

$$8. 7x^2 - 43x + 6 \text{ NO GCF}$$

$$\begin{array}{r} (7x-1)(x-6) \\ \quad \quad \quad \cup \\ \quad \quad \quad -1x \\ \quad \quad \quad -42x \\ \quad \quad \quad \hline \quad \quad \quad -43x \end{array}$$

$$9. 7v^2 - 32v - 15 \text{ NO GCF}$$

$$\begin{array}{r} (7v+3)(v-5) \\ \quad \quad \quad \cup \\ \quad \quad \quad 3v \\ \quad \quad \quad -35v \\ \quad \quad \quad \hline \quad \quad \quad -32v \end{array}$$

$$10. \frac{15x^3}{3x} + \frac{108x^2}{3x} + \frac{21x}{3x}$$

$$3x(5x^2 + 36x + 7)$$

$$\begin{array}{r} 3x(5x+1)(x+7) \\ \quad \quad \quad \cup \\ \quad \quad \quad -1x \\ \quad \quad \quad 35x \\ \quad \quad \quad \hline \quad \quad \quad 36x \end{array}$$