

## EQUATION EXPEDITION—PARTNER A

Solve each problem using one of the following methods—graphing, factoring, or dividing. You can only use each method once. Show all necessary work and indicate which method you chose for each question.

1.

Circle the method you used:      Graphing      Factoring      Dividing

$$\begin{array}{r} 5x^2 + 5x - 13 + \frac{-11}{x-1} \\ x-1 \overline{) 5x^3 + 0x^2 - 18x + 2} \\ \underline{-(5x^3 - 5x^2)} \phantom{+ 2} \\ 5x^2 - 18x \phantom{+ 2} \\ \underline{-(5x^2 - 5x)} \phantom{+ 2} \\ -13x + 2 \phantom{+ 2} \\ \underline{-(-13x + 13)} \\ -11 \end{array}$$

2.

Circle the method you used:      Graphing      Factoring      Dividing

$$\begin{array}{r} x - 4 \\ x + 10 \overline{) x^2 + 6x - 40} \\ \underline{-(x^2 + 10x)} \phantom{- 40} \\ -4x - 40 \\ \underline{-(-4x - 40)} \\ 0 \end{array}$$

3.

Circle the method you used:      Graphing      Factoring      Dividing

$$\begin{array}{l} x^5 - x \\ x(x^2 + 1)(x + 1)(x - 1) \end{array}$$

## EQUATION EXPEDITION—PARTNER B

Solve each problem using one of the following methods—graphing, factoring, or dividing. You can only use each method once. Show all necessary work and indicate which method you chose for each question.

1.

Circle the method you used:      **Graphing**      **Factoring**      **Dividing**

$$x^3 - x$$

$$x(x+1)(x-1)$$

2.

Circle the method you used:      **Graphing**      **Factoring**      **Dividing**

$$\begin{array}{r} \phantom{x^3 + x} \phantom{)} \phantom{-x^4 + 2x^2 - 12x - 3} \phantom{-x} \phantom{+ \frac{3x^2 - 12x - 3}{x^3 + x}} \\ x^3 + x \phantom{)} \phantom{-x^4 + 2x^2 - 12x - 3} \\ \hline \phantom{x^3 + x} \phantom{)} \phantom{-x^4 + 2x^2 - 12x - 3} \\ \phantom{x^3 + x} \phantom{)} \phantom{-x^4 + 2x^2 - 12x - 3} -(-x^4 - x^2) \\ \hline \phantom{x^3 + x} \phantom{)} \phantom{-x^4 + 2x^2 - 12x - 3} 3x^2 - 12x - 3 \end{array}$$

3.

Circle the method you used:      **Graphing**      **Factoring**      **Dividing**

$$\begin{array}{r} \phantom{x+2} \phantom{)} \phantom{-x^2 + 4x + 12} \phantom{-x+6} \\ x+2 \phantom{)} \phantom{-x^2 + 4x + 12} \\ \hline \phantom{x+2} \phantom{)} \phantom{-x^2 + 4x + 12} \\ \phantom{x+2} \phantom{)} \phantom{-x^2 + 4x + 12} -(-x^2 - 2x) \\ \hline \phantom{x+2} \phantom{)} \phantom{-x^2 + 4x + 12} 6x + 12 \\ \phantom{x+2} \phantom{)} \phantom{-x^2 + 4x + 12} -(6x + 12) \\ \hline \phantom{x+2} \phantom{)} \phantom{-x^2 + 4x + 12} 0 \end{array}$$