

$$1. \quad \begin{array}{r} x+6 \\ x-4 \overline{) x^2+2x-24} \\ \underline{-x^2+4x} \\ 6x-24 \\ \underline{-6x+24} \\ 0 \end{array}$$

$$\begin{array}{r} x(x-4) \\ = x^2 - 4x \\ \hline 6(x-4) \\ = 6x - 24 \end{array}$$

$$11 \overline{) 3045} \\ \underline{-22} \\ 845$$

$$(x+6)$$

$$2. \quad \begin{array}{r} 2x^2+14x+25 + \frac{51}{x-2} \\ x-2 \overline{) 2x^3+10x^2-3x+1} \\ \underline{-2x^3+4x^2} \\ 14x^2-3x+1 \\ \underline{-14x^2+28x} \\ 25x+1 \\ \underline{-25x+50} \\ 51 \end{array}$$

$$\begin{array}{r} 2x^2(x-2) \\ = 2x^3 - 4x^2 \\ \hline 14x(x-2) \\ = 14x^2 - 28x \end{array}$$

$$\begin{array}{r} 25(x-2) \\ = 25x - 50 \end{array}$$

$$3. \quad x^3-2 \overline{) x^5-3x^4+5x^3+x^2}$$

$$\begin{array}{r} x^2-3x+5 + \frac{3x^2-6x+10}{x^3-2} \\ x^3+2x^2+2x-2 \overline{) x^5-3x^4+5x^3+x^2+0x+0} \\ \underline{-x^5+2x^4+2x^3-2x^2} \\ -3x^4+5x^3+3x^2+2x+0 \\ \underline{+3x^4-6x^3+6x^2-6x} \\ 5x^3+3x^2-6x+0 \\ \underline{-5x^3+10x^2-10x+10} \\ 3x^2-6x+10 \end{array}$$

NOTE

- EVERYTHING IN STANDARD Form
- PUT ZERO PLACE HOLDERS FOR MISSING POWERS

$$\begin{array}{r} x^2(x^3+2x^2+2x-2) \\ x^5+2x^4+2x^3-2x^2 \\ \hline -3x(x^3+2x^2+2x-2) \\ -3x^4+6x^3+6x^2-6x \\ \hline 5(x^3+2x^2+2x-2) \\ 5x^3+10x^2+10x-10 \end{array}$$