

$$1. (-45x) (-50x^3y^3) (-2x^2y) = 4500x^6y^7$$

$$2. (-20A^2BC) (-4A^2B^2C^2) (-55ABC) (-6AB^2) = 26400A^4B^5C^3$$

$$\frac{30 \times 55}{20 \times 6}$$

$$= \frac{1650}{120} = 13.75$$

$$3. (3A^2 + 5B^2 - 4) (3A^2) = 9A^4 + 15A^2B^2 - 12A^2$$

$$4. \left( \frac{2}{3} A^2B^2 - \frac{1}{4} A^2B^3 + \frac{5}{6} AB^4 - \frac{2}{5} B^5 \right) \left( -\frac{1}{2} AB^2 \right)$$

$$\left( \frac{2}{3} A^2B^2 - \frac{1}{4} A^2B^3 \right) \left( -\frac{1}{2} A^1B^2 \right) = -\frac{1}{3} A^3B^4 + \frac{1}{8} A^3B^5$$

$$\left( -\frac{1}{4} A^2B^3 + \frac{5}{6} AB^4 \right) \left( -\frac{1}{2} A^1B^2 \right) = \frac{1}{8} A^3B^5 - \frac{5}{12} A^2B^6$$

$$\left( \frac{2}{3} A^2B^2 - \frac{1}{4} A^2B^3 \right) \left( -\frac{2}{5} A^1B^2 \right) = -\frac{2}{15} A^3B^4 + \frac{1}{10} A^3B^5$$

$$\left( -\frac{2}{5} B^5 - \frac{1}{2} AB^2 \right) \left( -\frac{1}{2} AB^2 \right) = \frac{1}{5} A^2B^7 + \frac{1}{4} A^2B^4$$

$$-\frac{2}{15} A^3B^4 + \frac{1}{8} A^3B^5 - \frac{2}{12} A^2B^6 + \frac{2}{16} A^2B^7 + \frac{1}{5} A^2B^7 + \frac{1}{4} A^2B^4$$

$$5. (3x^2 - 2x^3 - x^4 + 30x - 10) (20x^2 + 30x - 2)$$

$$60x^4 - 40x^5 - 20x^6 + 600x^3 - 400x^2$$

$$+ 70x^5 - 60x^6 - 30x^7 + 100x^4 - 600x$$

$$\frac{60x^6 + 50x^5 + 86x^4 + 874 + 470x^3 + 580x + 40}{}$$

$$6 \quad (5x^6 + 5x^4 + 30x^2 - 2x)(x^2 - x + 3)$$

$$\begin{array}{r} 5x^8 + 5x^6 + 30x^4 - 2x^3 \\ - 5x^7 - 5x^5 - 20x^3 + 2x^2 \\ \hline 5x^8 - 5x^7 + 20x^6 - 5x^5 + 45x^4 + 32x^3 + 92x^2 - 6x \end{array}$$

$$7 \quad (20x^4 - 2x^3 + 30x^2 + 50x + 100)(x + 2)$$

$$\begin{array}{r} 20x^5 - 2x^4 + 30x^3 + 50x^2 + 100x \\ + 40x^4 + 4x^3 + 60x^2 + 100x + 200 \\ \hline 20x^5 + 38x^4 + 26x^3 + 110x^2 + 200x + 200 \end{array}$$