

$$1 = (3a^2 + 5a^2 + 4) \div (3a)$$

$$\frac{3a^3}{3a} + \frac{5a^2}{3a} + \frac{4}{3a}$$

$$\frac{3}{3} a^3 + \frac{5}{3} a^2 - \frac{4}{3} a$$

$$2 = (2/3 a^2 b^2 - 1/4 a^2 b^4 + 5/6 ab^4 - 2/5 b^5) \div (-1/2 ab^2)$$

$$\frac{2/3 a^2 b^2}{-1/2 ab^2} - \frac{1/4 a^2 b^4}{-1/2 ab^2} + \frac{5/6 ab^4}{-1/2 ab^2} - \frac{2/5 b^5}{-1/2 ab^2}$$

$$\frac{4}{3} ab - \frac{2}{4} ab^2 + \frac{10}{6} ab^2 - \frac{4}{5} ab^3$$

$$\frac{4a}{3} - \frac{1ab^2}{2} + \frac{5b^2}{3} - \frac{4ab^3}{5}$$

$$3 = (x^4 - 2x^3 - 11x^2 + 30x - 20) \div (x^2 + 3x - 2)$$

$$\begin{array}{r} x^2 + 3x - 2 \overline{) x^4 - 2x^3 - 11x^2 + 30x - 20} \\ \underline{-x^4 - 3x^3 + 12x^2} \\ -5x^3 - 0x^2 + 30x \\ \underline{5x^3 + 15x^2 - 10x} \\ 6x^2 + 20x - 20 \\ \underline{-6x^2 - 18x + 12} \\ 2x - 8 \end{array}$$

$$4 = (x^6 + 5x^4 + 3x^2 - 2x) \div (x^2 - x + 3)$$

$$\begin{array}{r}
 x^2 - x + 3 \overline{) x^6 + 0x^5 + 5x^4 + 0x^3 + 3x^2 - 2x + 0} \\
 \underline{-x^6 + x^5 - 3x^4} \\
 x^5 + 2x^4 + 0x^3 \\
 \underline{-x^5 + x^4 - 3x^3} \\
 3x^4 - 3x^3 + 3x^2 \\
 \underline{-3x^4 + 3x^3 - 9x^2} \\
 -6x^2 - 2x + 0 \\
 \underline{+6x^2 - 6x + 18} \\
 -8x + 18
 \end{array}$$

$$5 = (x^4 - 2x^3 - 11x^2 + 30x - 20) \div (x^2 + 3x - 2)$$

$$\begin{array}{r}
 x^2 + 3x - 2 \overline{) x^4 - 2x^3 - 11x^2 + 30x - 20} \\
 \underline{-x^4 - 3x^3 + 2x^2} \\
 -5x^3 - 9x^2 + 30x \\
 \underline{5x^3 + 15x^2 - 10x} \\
 6x^2 + 20x - 20 \\
 \underline{-6x^2 - 18x + 12} \\
 2x - 8
 \end{array}$$

$$6 = (x^6 + 5x^4 + 3x^2 - 2x) \div (x^2 - x + 3)$$

$$\begin{array}{r}
 x^2 - x + 3 \overline{) x^6 + 5x^4 + 0x^3 + 3x^2 - 2x + 0} \\
 \underline{-x^6 + x^5 - 3x^4} \\
 x^5 + 2x^4 + 0x^3 \\
 \underline{-x^5 + x^4 - 3x^3} \\
 3x^4 - 3x^3 + 3x^2 \\
 \underline{-3x^4 + 3x^3 - 9x^2} \\
 -6x^2 - 2x + 0 \\
 \underline{6x^2 - 6x + 18} \\
 -8x + 18
 \end{array}$$

$$7 = (2x^4 - 2x^3 + 3x^2 + 5x + 10) \div (x + 2)$$

$$\begin{array}{r}
 2x^3 - 6x^2 + 15x - 25 \\
 x + 2 \overline{) 2x^4 - 2x^3 + 3x^2 + 5x + 10} \\
 \underline{-2x^4 - 4x^3} \\
 -6x^3 + 3x^2 \\
 \underline{6x^3 + 12x^2} \\
 15x^2 + 5x \\
 \underline{-15x^2 - 30x} \\
 25x + 100 \\
 \underline{25x + 50} \\
 60
 \end{array}$$

$$\frac{25x + 50}{60}$$

$$\delta = (x^{10} - 1024) \div (x + 2)$$

$$x + 2 \overline{) x^9 - 2x^8 + 4x^7 - 8x^6 + 16x^5 - 32x^4 + 64x^3 - 128x^2 + 256x - 512}$$

$$-x^9 - 2x^8$$

$$\hline 2x^9 + 4x^8$$

$$-4x^8 - 8x^7$$

$$\hline 8x^8 + 16x^7$$

$$-16x^7 - 32x^6$$

$$\hline 32x^7 + 64x^6$$

$$-64x^6 - 128x^5$$

$$\hline 128x^6 + 256x^5$$

$$-256x^5 - 512x^4$$

$$\hline 512x^5 + 1024x^4$$

$$-1024x^4 - 2048x^3$$

$$\hline 2048x^4 + 4096x^3$$

$$-4096x^3 - 8192x^2$$

$$\hline 8192x^3 + 16384x^2$$

$$-16384x^2 - 32768x$$

$$\hline 32768x^2 + 65536x$$

$$-65536x - 131072$$

$$\hline 131072x + 262144$$

0

$$9 = (x^3 - 5x^2) : (x-3)$$

$$x-3 \overline{) \begin{array}{r} x^3 + 3x^2 + 11x \\ -x^3 + 3x^2 \\ \hline \end{array}}$$

$$\begin{array}{r} 3x^2 - 5x \\ -3x^2 + 9x \\ \hline \end{array}$$

$$\begin{array}{r} 4x - 1 \\ -4x + 12 \\ \hline 11 \end{array}$$

$$R = -x^2 + 3x + 4 \left(\frac{11}{x-3} \right)$$

$$10 = (R^4 S^3 T^2 U)^5$$

$$R = R^{20}, 15 T^{10} U^5$$

$$11 = (-A^3 B^4 C^2 D^5)^6$$

$$12 = (3x^6 y^3 z^2) \quad R = 3x^{12} y^6 z^4 \quad R = \begin{array}{l} 6/10 a^2 b^5 - 12/6 a^2 b^5 - 12/2 a b^2 \\ 3b - a^2 b^2 - 20^2 b^5 - b a b^2 \end{array}$$

$$13 = (2/5 a^2 b - 4/3 ab - 4) (3/2 ab^2)$$