

②

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

$$x+5$$

④

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

$x^2 + x - 2$

④

$$\begin{array}{r} 2x^2 + 3x + 5 \\ \hline 3x+4 \overline{) 6x^3 + 17x^2 + 27x + 20} \\ \underline{6x^3 + 8x^2} \\ 9x^2 + 27x \\ \underline{9x^2 + 12x} \\ 15x + 20 \\ \underline{15x + 20} \\ 0 \end{array}$$

$$2x^2 + 3x + 5$$

8

$$\begin{array}{r} 2x - 3 \\ \hline 2x-1 \) \ 4x^2 - 8x + 6 \\ \quad \underline{4x^2 - 2x} \\ -6x + 6 \\ \underline{-6x + 3} \\ 3 \end{array}$$
$$2x - 3 + \frac{3}{2x-1}$$

10

$$\begin{array}{r} 3x + 7 \\ \hline x - 3 \) \ 3x^2 - 2x + 5 \\ \underline{3x^2 - 9x} \end{array}$$

$$3x + 7 + \frac{26}{x - 3}$$

$$\begin{array}{r} 7x + 5 \\ \underline{7x - 21} \\ 26 \end{array}$$

$$\begin{array}{r}
 \textcircled{12} \quad x^3 + 3x^2 + 9x + 27 \\
 \hline
 x-3 \bigg) \begin{array}{r}
 x^4 + 0x^3 + 0x^2 + 0x - 81 \\
 \underline{x^4 - 3x^3} \\
 3x^3 + 0x^2 \\
 \underline{3x^3 - 9x^2} \\
 9x^2 + 0x \\
 \underline{9x^2 - 27x} \\
 27x - 81 \\
 \underline{27x - 81} \\
 0
 \end{array} \\
 \\
 x^3 + 3x^2 + 9x + 27
 \end{array}$$

$$x^2 + x - 3 + \frac{-12}{x^2 + x - 2}$$

(4)

$$\begin{array}{r}
 x^2 + x - 3 \\
 \hline
 x^2 + x - 2 \) \ x^4 + 2x^3 - 4x^2 - 5x - 6 \\
 \underline{x^4 + x^3 - 2x^2} \\
 x^3 - 2x^2 - 5x \\
 \underline{x^3 + x^2 - 2x} \\
 -3x^2 - 3x - 6 \\
 \underline{-3x^2 - 3x + 6} \\
 -12
 \end{array}$$

(16)

$$\begin{array}{r} x^2 - 4x + 1 + \frac{4x-1}{2x^3+1} \\ \hline 2x^3+1 \overline{) 2x^5 - 8x^4 + 2x^3 + x^2 + 0x + 0} \\ \underline{2x^5} + x^2 \\ -8x^4 + 2x^3 + 0x \\ \underline{-8x^4} -4x \\ 2x^3 + 4x + 0 \\ \underline{2x^3} + 1 \\ 4x - 1 \end{array}$$

20

$$\begin{array}{r} -3 \overline{) 5 \quad -12 \quad -8} \\ \underline{ -15 \quad 81} \\ 5 \quad -27 \quad 73 \end{array}$$
$$5x - 27 + \frac{73}{x+3}$$

Q2

$$\begin{array}{r} 2 \overline{) 5 \quad -6 \quad 3 \quad 11} \\ \underline{ 10 \quad 8 \quad 22} \\ 5 \quad 4 \quad 11 \quad 33 \end{array}$$

$$5x^2 + 4x + 11 + \frac{33}{x-2}$$

(24)

$$\begin{array}{r|rrrrrrr} 3 & 1 & 4 & 0 & -3 & 2 & 3 \\ & & 3 & 21 & 63 & 180 & 546 \\ \hline & 1 & 7 & 21 & 60 & 182 & 549 \end{array}$$

$$x^4 + 7x^3 + 21x^2 + 60x + 182 + \frac{549}{x-3}$$

26

$$\begin{array}{r|rrrrr} -6 & 1 & -6 & 1 & -6 & 0 \\ & & -6 & 72 & -438 & 2664 \\ \hline & 1 & -12 & 73 & -444 & 2664 \end{array}$$

$$x^3 - 12x^2 + 73x - 444 \quad \tau \quad \frac{2664}{x+6}$$

28

$$\begin{array}{r|rrrrrrrr} -2 & 1 & 0 & 1 & 0 & -10 & 0 & 0 & 12 \\ & & -2 & 4 & -10 & 20 & -20 & 40 & -40 \\ \hline & 1 & -2 & 5 & -10 & 10 & -20 & 40 & \end{array}$$

R = -68

$$x^6 - 2x^5 + 5x^4 - 10x^3 + 10x^2 - 20x + 40 + \frac{-68}{x+2}$$

30

$$\begin{array}{r|rrrrrrrrr} 2 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & -128 \\ & & 2 & 4 & 8 & 16 & 32 & 64 & 128 \\ \hline & 1 & 2 & 4 & 8 & 16 & 32 & 64 & 0 \end{array}$$

$$x^6 + 2x^5 + 4x^4 + 8x^3 + 16x^2 + 32x + 64$$

