

- (1) Divide $\frac{x^3+1}{x-1}$
- (2) Divide $\frac{x^6+64}{x-2}$
- (3) Divide $\frac{x^2-8x+4}{x-3}$
- (4) Divide $\frac{x^2-6x-2}{x+5}$
- (5) Divide $\frac{27x^3+9x^2-3x-9}{3x-2}$
- (6) Divide $\frac{x^6-64}{x-2}$
- (7) Divide $(12x^2 + 7x - 4) \div (4x - 3)$
- (8) Divide $(9x^3 - 3x^2 - 5x - 25) \div (3x - 5)$
- (9) Divide $\frac{4x^3+17x^2+12x-2}{x+4}$
- (10) Divide $(2x^4 + 5x^3 + 7x^2 + 16x + 15) \div (2x + 3)$
- (11) Divide $(3x^3 + x^2 + 2x + 5) \div (x^2 + 2x + 1)$
- (12) Divide $(3x^4 + x^3 - 17x^2 + 19x - 6) \div (x^2 - 2x + 1)$

Key:

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| (1) $x^2 + x + 1 + \frac{2}{x-1}$ | (7) $3x + 4 + \frac{8}{4x-3}$ |
| (2) $x^5 + 2x^4 + 4x^3 + 8x^2 + 16x + 32 + \frac{128}{x-2}$ | (8) $3x^2 + 4x + 5$ |
| (3) $x - 5 + \frac{-11}{x-3}$ | (9) $4x^2 + x + 8 + \frac{-34}{x+4}$ |
| (4) $x - 11 + \frac{53}{x+5}$ | (10) $x^3 + x^2 + 2x + 5$ |
| (5) $9x^2 + 9x + 5 + \frac{1}{3x-2}$ | (11) $3x - 5 + \frac{9x+10}{x^2+2x+1}$ |
| (6) $x^5 + 2x^4 + 4x^3 + 8x^2 + 16x + 32$ | (12) $3x^2 + 7x - 6$ |