

$$(31) \quad \frac{6t^3 + 5t^2 + 9}{2t+3} \div 2 = \frac{3t^3 + \frac{5}{2}t^2 + \frac{9}{2}}{t + \frac{3}{2}}$$

$$\begin{array}{r} -\frac{3}{2} \bigg| \quad 3 \quad \frac{5}{2} \quad 0 \quad \frac{9}{2} \\ \downarrow \quad -\frac{9}{2} \quad 3 \quad -\frac{9}{2} \\ \hline 3 \quad -2 \quad 3 \quad 0 \end{array}$$

$$3t^2 - 2t + 3$$

$$(32) \quad \begin{array}{l} \text{Divisor: } x^2 - 1 + \frac{-3x+7}{x^2+2} \\ \text{Dividend: } x^2 + 0x + 2 \\ \hline (-) \quad x^2 + 0x^3 + 2x^2 \\ \hline \quad \quad \quad -x^2 - 3x + 5 \\ \quad \quad \quad (-) \quad -x^2 + 0x - 2 \\ \quad \quad \quad \quad \quad \quad -3x + 7 \end{array} \quad \begin{array}{l} \frac{x^4}{x^2} = x^2 \\ \frac{x^2}{x^2} = -1 \end{array}$$

(35)

$$\frac{4x + (x+15)}{x+3} = \frac{5x+15}{x+3}$$

(5)

$$= \frac{5(x+3)}{x+3}$$