

$$(37) (1-x^2)(1-x)$$

$$1-x-x^2+x^3$$

$$\boxed{x^3-x^2-x+1}$$

$$(38) x = 2 - 5g^{-1}(x)$$

$$\frac{x-2}{-5} = \frac{-5g^{-1}(x)}{-5}$$

$$\boxed{g^{-1}(x) = \frac{x-2}{-5}}$$

$$(39) (x^3 + 5^3)$$

$$\boxed{(x+5)(x^2-5x+25)}$$

$$(40) 3x(8x^3-1)$$

$$3x((2x)^3 - (1)^3)$$

$$\boxed{3(2x-1)(4x^2+2x+1)}$$

$$(41)$$

$$\begin{array}{r} 6x^2+0x+2 \\ x^2+0x+3 \overline{) 6x^4+0x^3+20x^2+0x-4} \\ \underline{(-) 6x^4+0x^3+18x^2} \\ 2x^2+0x-4 \\ \underline{(-) 2x^2+0x+6} \\ -10 \end{array}$$

$$\boxed{6x^2+2 - \frac{10}{x^2+3}}$$

$$(42)$$

$$\begin{array}{r} 2x^2+x-1 \\ x+4 \overline{) 2x^3+9x^2+3x-6} \\ \underline{(-) 2x^3+8x^2} \\ x^2+3x \\ \underline{(-) x^2+4x} \\ -1x-6 \\ \underline{(-) -1x-4} \\ -2 \end{array}$$

$$\boxed{-2}$$

or
Remainder is...

$$2(-4)^3 + 9(-4)^2 + 3(-4) - 6$$

$$\begin{array}{l} \rightarrow 2(-64) + 9(16) - 12 - 6 \\ -128 + 144 - 12 - 6 \end{array}$$

$$\boxed{-2}$$