

$$38) \quad u(x) = 1 - 5x \quad v(x) = 3x^2 + 4 \quad \Rightarrow \quad u'(x) = -5 \\ \text{et } v'(x) = 6x$$

$$a) \quad f' = (u+v)' = u' + v' = -5 + 6x = \underline{\underline{6x-5}}$$

$$b) \quad g' = (2u-3v)' = (2u)' - (3v)' = 2u' - 3v' = 2(-5) - 3(6x) = -10 - 18x = \underline{\underline{-10-18x}}$$

$$c) \quad h' = (u \times v)' = u'v + uv' = -5(3x^2+4) + (1-5x) \times 6x \\ = -15x^2 - 20 + 6x - 30x^2 = \underline{\underline{-45x^2 + 6x - 20}}$$

$$d) \quad h' = \left(\frac{2}{v}\right)' = 2 \times \left(\frac{1}{v}\right)' = \frac{-2v'}{v^2} = \frac{-2 \times 6x}{(3x^2+4)^2} = \underline{\underline{\frac{-12x}{(3x^2+4)^2}}}$$

$$e) \quad l' = \left(\frac{u}{v}\right)' = \frac{u'v - uv'}{v^2} = \frac{-5(3x^2+4) - (1-5x) \times 6x}{(3x^2+4)^2} \\ = \frac{-15x^2 - 20 - 6x + 30x^2}{(3x^2+4)^2} = \underline{\underline{\frac{15x^2 - 6x - 20}{(3x^2+4)^2}}}$$

$$f) \quad m' = (e^u)' = u' e^u = \underline{\underline{-5 e^{1-5x}}}$$