

$$6. \quad f(x) = e^u \quad u = 2x+3 \quad u' = 2$$

$$f'(x) = e^u u' = e^{2x+3} \times 2 = 2e^{2x+3}$$

$$g'(x) = 1 + e^x$$

$$7. \quad f(x) = 3x - 4 + e^u \quad u = -2x \quad u' = -2$$

$$f'(x) = 3 + e^u u' = 3 + e^{-2x} \times (-2) = 3 - 2e^{-2x}$$

$$g(x) = 2x^2 - 4e^u \quad u = -x \quad u' = -1$$

$$g'(x) = 4x - 4e^u u' = 4x - 4e^{-x} \times (-1) = 4x - 4e^{-x}$$

$$8. \quad f'(x) = 3x^2 - \frac{3}{x}$$

$$g(x) = 2u^3 + x \quad u = \ln x \quad u' = \frac{1}{x}$$

$$g'(x) = 2 \times 3u^2 u' + 1 = 6(\ln x)^2 \frac{1}{x} + 1 =$$

$$= \frac{6(\ln x)^2}{x} + 1$$