. 5 1. Use the quotient rule to find the derivative of $C(x) = \dfrac{6x - 11}{8x + 1}$.

Solution. Using the quotient rule (see page 231 of the text), we have

$$\begin{aligned} C'(x) &= \frac{6 \cdot (8x + 1) - (6x - 11) \cdot 8}{(8x + 1)^2} \\ &= \frac{(48x + 6) - (48x - 88)}{(8x + 1)^2} \\ &= \frac{92}{(8x + 1)^2}. \end{aligned}$$

. 5 2. Find the derivative of $h(x) = (8x^4 - 3x^2)^3$.

Solution. Using the chain rule (see page 240 of the text), we have

$$h'(x) = 3(8x^4 - 3x^2)^2 \frac{d}{dx}\big(8x^4 - 3x^2\big) = 3(8x^4 - 3x^2)^2(32x^3 - 6x).$$