

More Chain Rule Practice

1. Take the derivative of the following functions:

(a) $f(x) = 4 + x$

(b) $f(x) = x^4 + 4^x$

(c) $f(x) = \sqrt{4 + x}$

(d) $f(x) = \frac{4x^2}{\sqrt{4+x}}$

(e) $f(x) = (1 + \sqrt{x^2 - 4})^{\frac{4}{3}}$

(f) $f(x) = \frac{7x}{4}$

(g) $f(x) = \frac{7x}{4+x}$

2. Let $f(x) = \sqrt{x + 4}$.

(a) Determine $f'(2)$.

(b) Determine $f'(4)$.

(c) Which is larger, $f(2)$ or $f(4)$? Why?

(d) Which is larger, $f'(2)$ or $f'(4)$? Why?