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

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

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?