8. (12 points) The potential energy E, in joules, of an object above the Earth's surface is a function of the distance, h, in meters, of the object from the surface of the Earth. That is, $E = f(h)$.

(a) In the context of this problem, explain the meaning of $f(20) = 1000$?

(b) In the context of this problem, explain the meaning of $f'(9) = 50$?

(c) In the context of this problem, explain the meaning of $f^{-1}(150) = 3$?

(d) In the context of this problem, explain the meaning of $(f^{-1})'(400) = \frac{1}{50}$?