

1. A rocket is launching, and its height  $h$  in meters is a function of  $t$  in seconds (so we are considering the function  $h(t)$ ). Explain what  $h'(10) = 1035$  means in language your parents could understand. Your answer must include units.

Compute derivatives of the following functions using derivative rules.

2.  $f(t) = \sqrt{t}e^t$

3.  $f(t) = e^{-t}$

4.  $f(t) = e^{2t}$

5.  $f(x) = \frac{e^{2x}}{1 - e^x}$