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 $h^{\prime}(10)=1035$ means in language your mom could understand. You answer must include units.

Compute derivatives of the following functions using derivative rules.
2. $f(x)=\sqrt{t} e^{t}$
3. $f(t)=e^{-t}$
4. $f(t)=e^{2 t}$
5. $f(v)=\left(1+\frac{1}{v}\right)\left(2-\frac{1}{v}\right)$
6. $f(x)=\frac{e^{2 x}}{1-e^{x}}$
7. $f(t)=\frac{\sin (x)}{\cos (x)}$
8. $f(t)=e^{2 x} \sin (x)$
9. $f(t)=\left(1+x^{2}\right) e^{x} \sin (x)$

