HW Quiz B (Graphing functions and derivatives)
Name $\qquad$

1. Graph the derivative of the functions given below


2. Graph the function given the graph of the derivative function



3. Sketch the graph of a continuous function $f$ with $f(0)=1$ and

$$
f^{\prime}(x)=\left\{\begin{array}{lc}
-1, & \mathrm{x}<-1 \\
3, & \mathrm{x}>-1
\end{array}\right\}
$$


4. Consider the curve defined parametrically by $x=2 t^{3}$ and $y=3 t^{2}-2 t$. Find the equation for the line tangent to the curve at time $\mathrm{t}=1$.
5. A curve C is defined by the parametric equations $\mathrm{x}=2 \mathrm{t}^{3}$ and $\mathrm{y}=3 \mathrm{t}^{2}-2 \mathrm{t}$. Find the equation of the line tangent to the graph of $C$ at the point $(16,8)$ ?
6. A curve $C$ is defined by the parametric equations $x=2 t^{3}$ and $y=3 t^{2}-2 t$. Determine the times that the curve has a horizontal tangent and a vertical tangent.

