7. [15 points] The graph of a function $f(x)$ is shown below. The domain of $f(x)$ is $-2 \leq x \leq 4$.


You do not need to show work on this page.
a. [6 points] Each of the functions $g(x)$ and $h(x)$ shown below is a transformation of the function $f(x)$. Write a formula for each function in terms of $f(x)$.


$g(x)=$ $\qquad$ $h(x)=$ $\qquad$
b. [4 points] Determine the domain and range of the function $j(x)=-2 f(x-6)+3$.

Domain: $\quad \leq x \leq$

$$
\text { Range: } \quad \leq \quad \leq y \leq
$$

$\qquad$
c. [5 points] On the axes below, draw a graph of the derivative of $f(x)$.


