1. The graph below is a graph of \( y = f(x) \). Rank \( f'(0), f'(7), f'(11), f'(13) \) in increasing order.

\[ f'(7), f'(11), f'(0), f'(13) \]

2. Consider the function \( g(x) = \frac{1}{1 - \sqrt{x}} \).

   (a) What is the domain of \( g(x) \)?
   
   \[ [0, 1) \cup (1, \infty) \]
   
   (b) Is 1 the range of \( g(x) \)? Explain your answer.
   
   Yes
   
   B/c if \( x = 0 \) then
   
   \[ g(0) = \frac{1}{1 - 0} = 1 \]
   
   so
   
   1 is a possible output.
3. Let \( h(x) = \log_b x \) where \( b > 1 \).

(a) What is the domain of \( h(x) \)?

\[ \{x \mid x > 0 \} \]  

(b) What is the range of \( h(x) \)?

all real \#s

(c) What are the root(s) of \( h(x) \)?

\[ x = \frac{b}{c} \quad h(c) = 0 \]

(d) Is the graph of \( h(x) \) concave up or concave down?

concave down