Exponential Functions

Evaluate each function at the given value.

1) $f(x) = \frac{1}{3} \cdot 6^x$ at $x = 2$

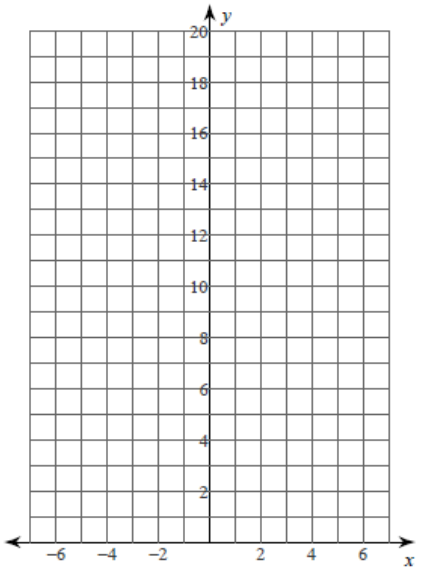
2) $f(n) = 10 \cdot 2^n$ at $n = 5$

3) $f(n) = 10 \cdot 2^n$ at $n = -2$

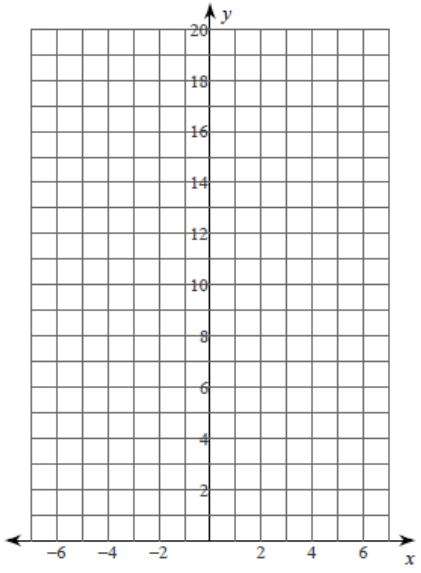
4) $g(x) = \frac{1}{5} \cdot \left(\frac{1}{3}\right)^x$ at $x = 3$

Sketch the graph of each function.

5) $f(x) = 4 \cdot 2^x$



6) $f(x) = 4 \cdot \left(\frac{1}{2}\right)^x$



Answers

Evaluate each function at the given value.

1) $f(x) = \frac{1}{3} \cdot 6^x$ at $x = 2$

12

2) $f(n) = 10 \cdot 2^n$ at $n = 5$

320

3) $f(n) = 10 \cdot 2^n$ at $n = -2$

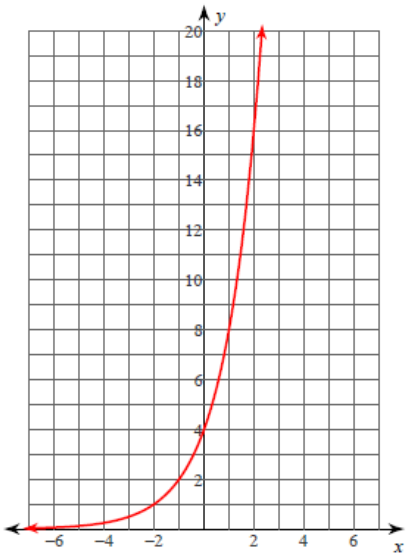
$\frac{5}{2}$

4) $g(x) = \frac{1}{5} \cdot \left(\frac{1}{3}\right)^x$ at $x = 3$

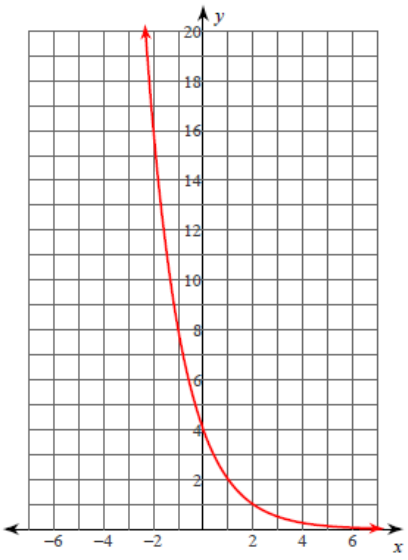
$\frac{1}{135}$

Sketch the graph of each function.

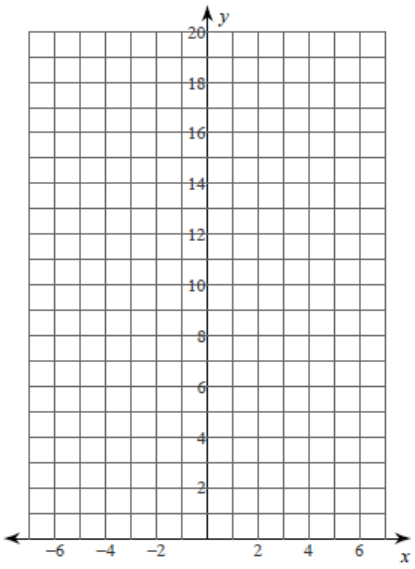
5) $f(x) = 4 \cdot 2^x$



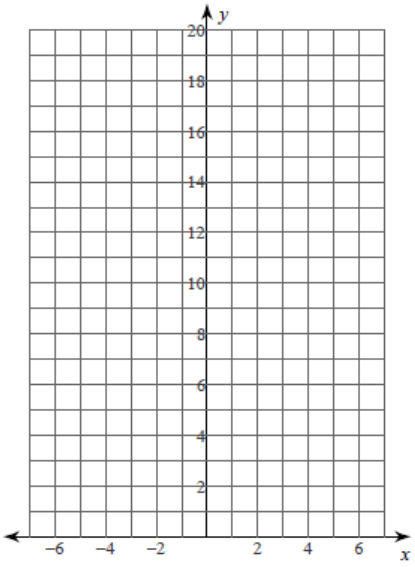
6) $f(x) = 4 \cdot \left(\frac{1}{2}\right)^x$



7) $f(x) = \frac{1}{2} \cdot 3^x$

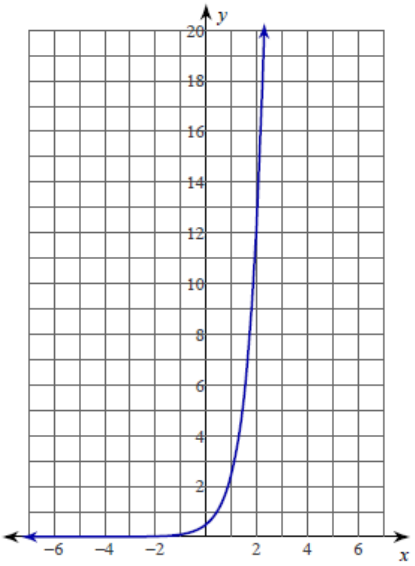


8) $f(x) = 5 \cdot \left(\frac{1}{2}\right)^x$

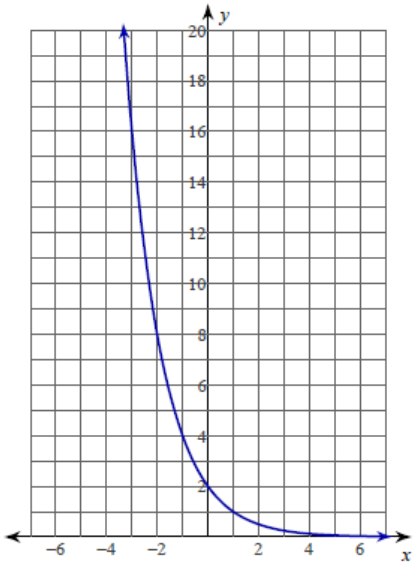


Write an equation for each graph.

9)

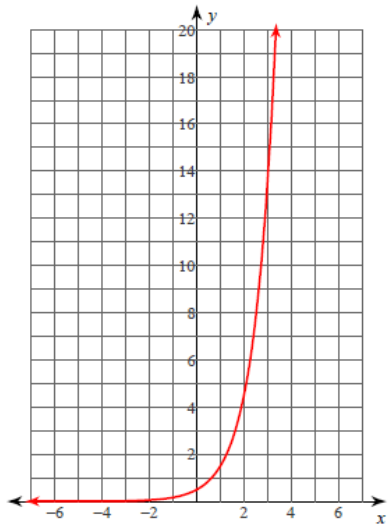


10)

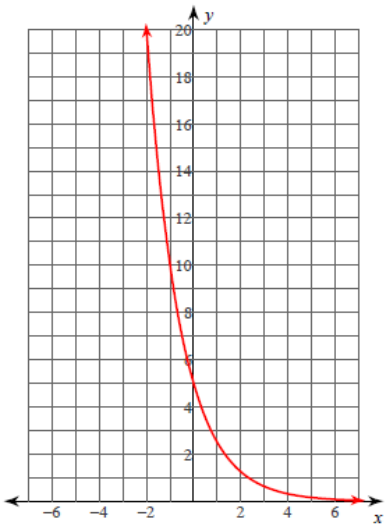


Answers

7) $f(x) = \frac{1}{2} \cdot 3^x$

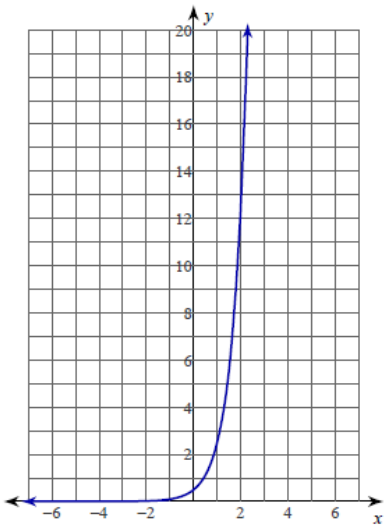


8) $f(x) = 5 \cdot \left(\frac{1}{2}\right)^x$



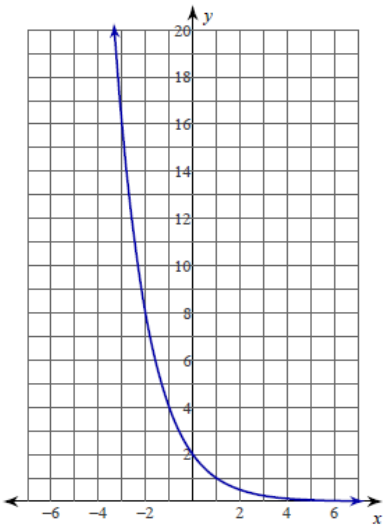
Write an equation for each graph.

9)



$y = \frac{1}{2} \cdot 5^x$

10)



$y = 2 \cdot \left(\frac{1}{2}\right)^x$