

Exponential Functions

Evaluate each function at the given value.

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

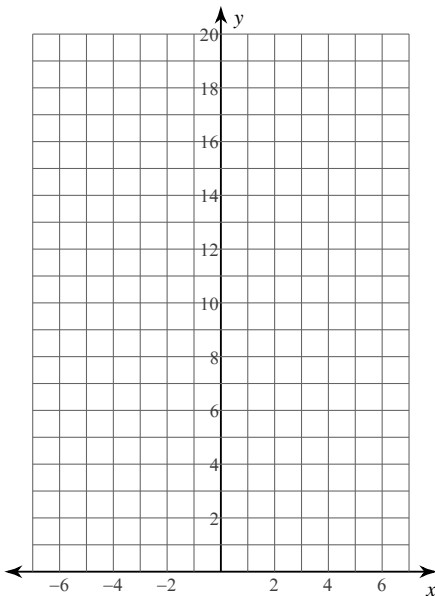
2) $f(n) = 10 \cdot 2^n$ at $n = 5$

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

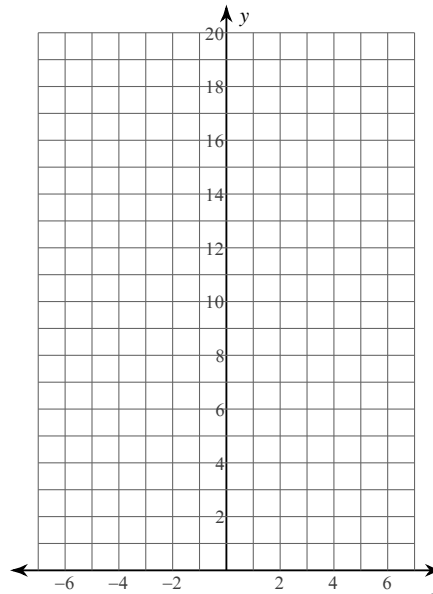
4) $g(x) = \frac{1}{5} \cdot \left(\frac{1}{3}\right)^x$ at $x = 3$

Sketch the graph of each function.

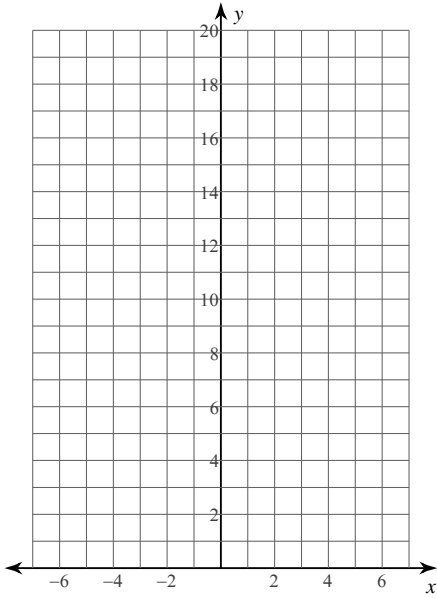
5) $f(x) = 4 \cdot 2^x$



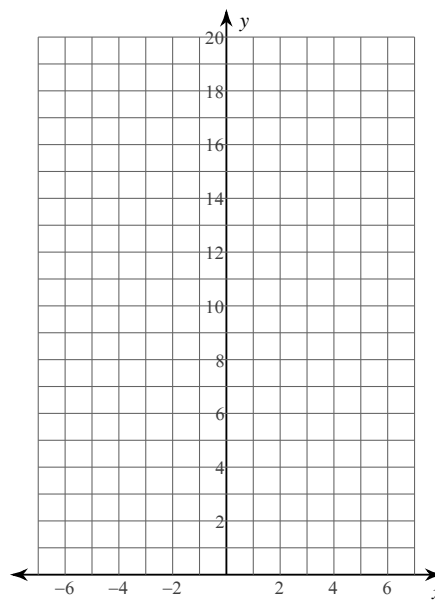
6) $f(x) = 4 \cdot \left(\frac{1}{2}\right)^x$



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

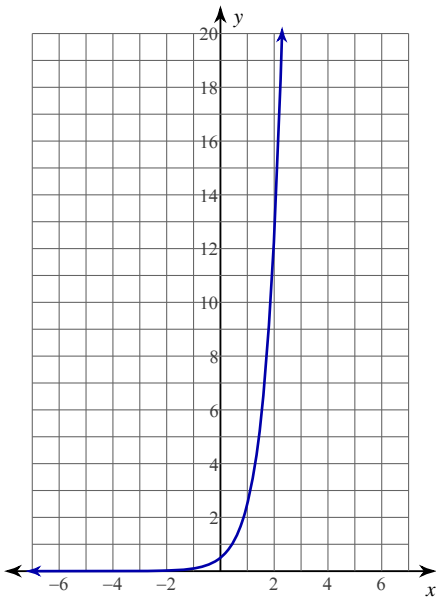


$$8) f(x) = 5 \cdot \left(\frac{1}{2}\right)^x$$

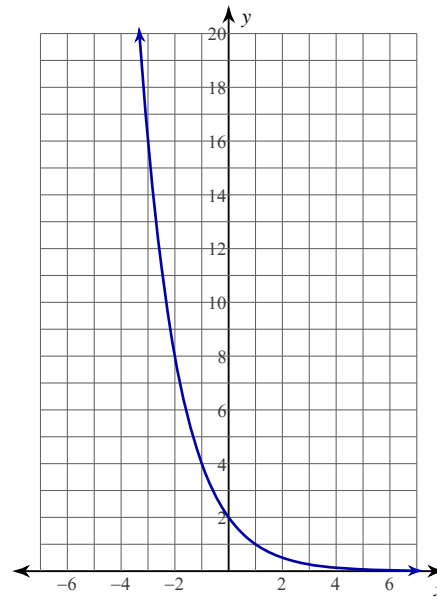


Write an equation for each graph.

9)



10)



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12

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

320

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

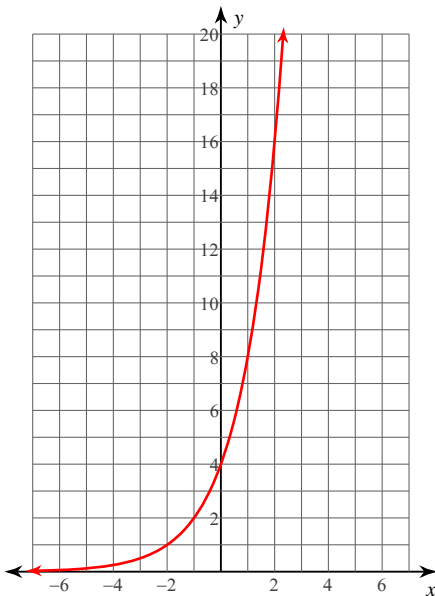
 $\frac{5}{2}$

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

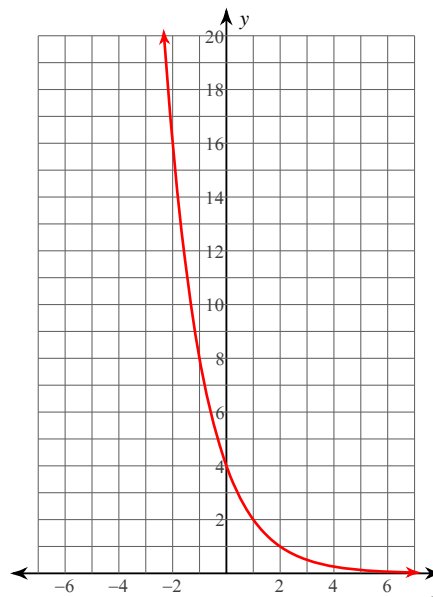
 $\frac{1}{135}$

Sketch the graph of each function.

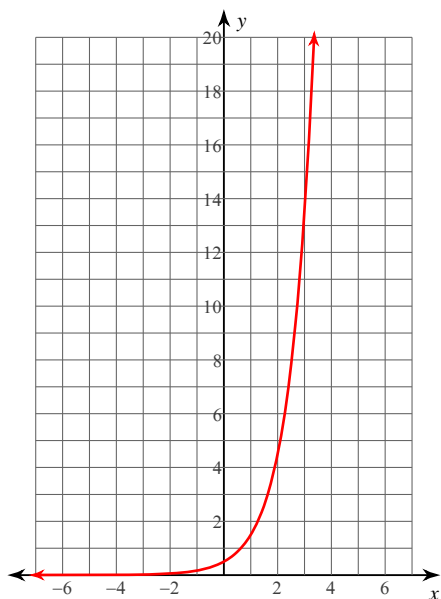
5) $f(x) = 4 \cdot 2^x$



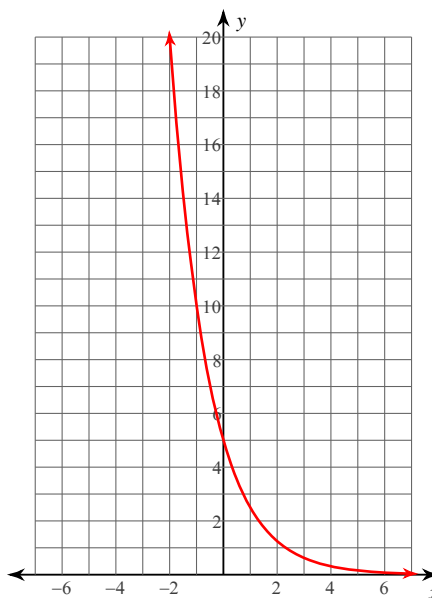
6) $f(x) = 4 \cdot \left(\frac{1}{2}\right)^x$



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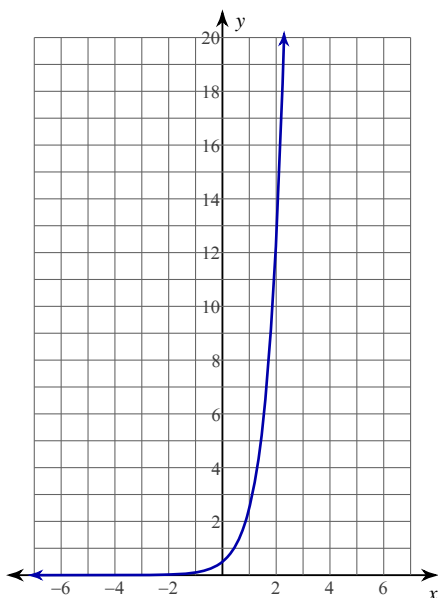


$$8) f(x) = 5 \cdot \left(\frac{1}{2}\right)^x$$



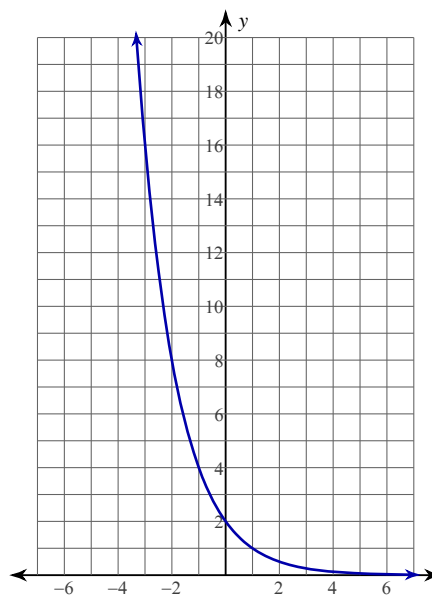
Write an equation for each graph.

9)



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

10)



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