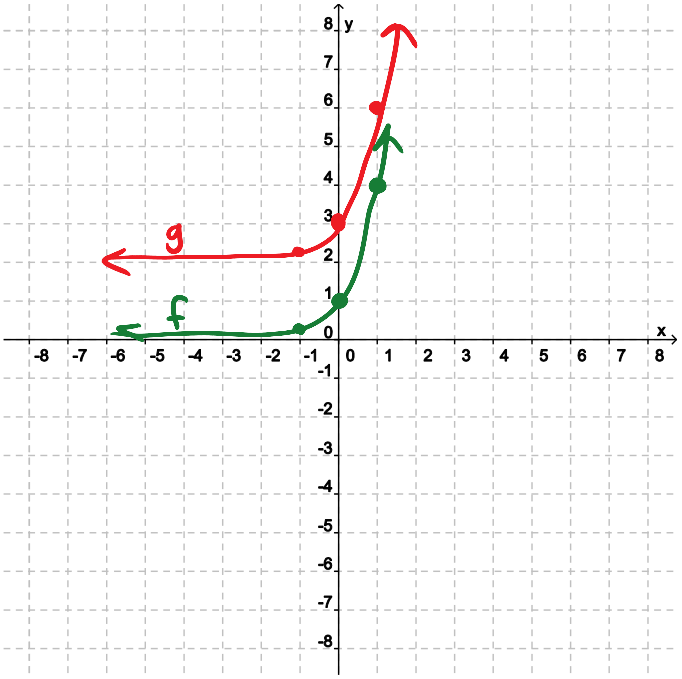
1. Graph $f(x) = 4^x$ and $g(x) = 4^x + 2$. How is the graph of g related to the graph of f?

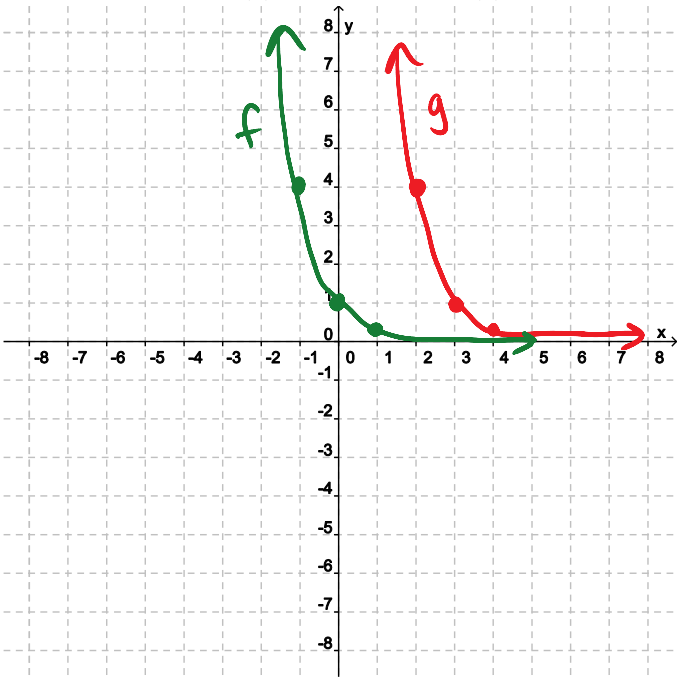


x	f(x)
-1	$\frac{1}{4}$
0	1
1	4

x	g(x)
-1	$\frac{1}{4}+2=2\frac{1}{4}$
0	$1+2=3$
1	$4+2=6$

g is f shifted up 2

2. Graph $f(x) = \left(\frac{1}{4}\right)^x$ and $g(x) = \left(\frac{1}{4}\right)^{x-3}$. How is the graph of g related to the graph of f?



x	f(x)
-1	4
0	1
1	$\frac{1}{4}$

x	g(x)
2	4
3	1
4	$\frac{1}{4}$

g is f shifted right 3

3. Approximate each number using a calculator. Round your answer to three decimal places.

a) $3^{2.4} \approx 13.967$

b) $e^{3.4} \approx 29.964$

c) $e^{-0.75} \approx 0.472$

Q: April says May is a liar. May says June is a liar. June says April and May are both liars. If only one person is telling the truth, who is it?