

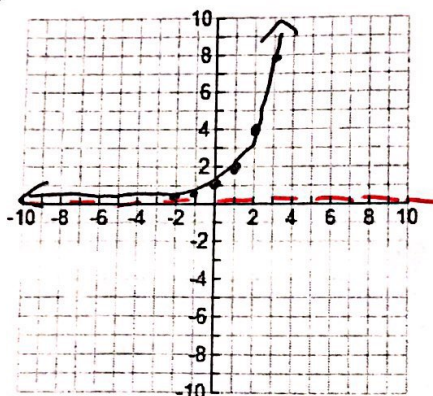
Graphing: Exponential Growth Functions

Graph and analyze the following exponential growth functions. Your graph should accurately show the y-intercept and the asymptote. Determine at least two additional points on the right side of the graph. USE A PENCIL!

1. $f(x) = (2)^x + 0$

x	f(x)
-2	.25
-1	.5
0	1
1	2
2	4

3 8



y-intercept 1 asymptote $y=0$

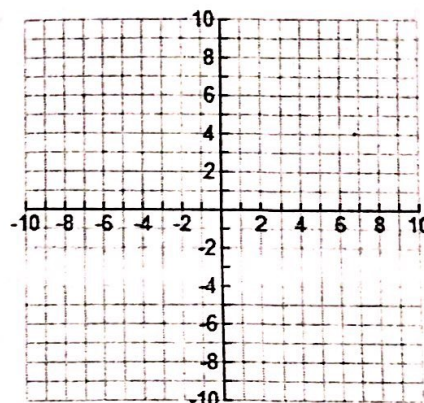
domain $(-\infty, \infty)$ range $(0, \infty)$

end behavior: as $x \rightarrow +\infty$, $f(x) \rightarrow \infty$
and right arm

as $x \rightarrow -\infty$, $f(x) \rightarrow 0$
left

2. $f(x) = -(2)^x$

x	f(x)
-2	
-1	
0	
1	
2	



y-intercept _____ asymptote _____

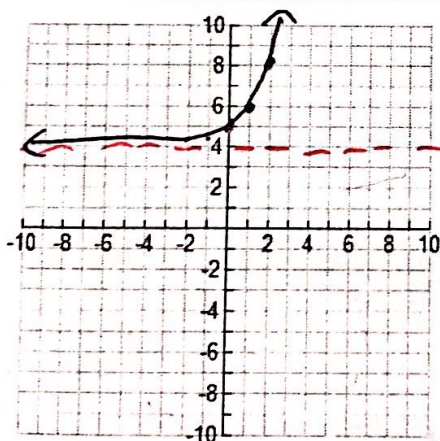
domain _____ range _____

end behavior: as $x \rightarrow +\infty$, $f(x) \rightarrow$ _____ and

as $x \rightarrow -\infty$, $f(x) \rightarrow$ _____

3. $f(x) = (2)^x + 4$

x	f(x)
-2	4.25
-1	4.5
0	5
1	6
2	8



y-intercept 5 asymptote 4

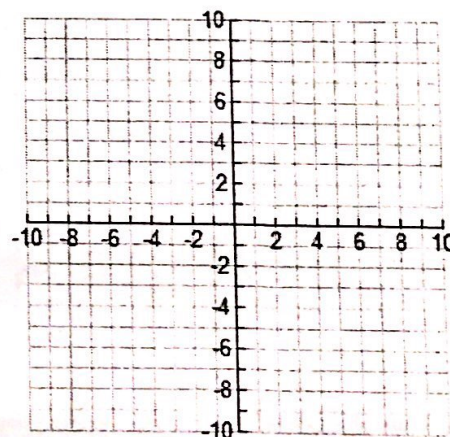
domain $(-\infty, \infty)$ range $(4, \infty)$

end behavior: as $x \rightarrow +\infty$, $f(x) \rightarrow \infty$
and right

as $x \rightarrow -\infty$, $f(x) \rightarrow 4$

4. $f(x) = (2)^{x-3}$

x	f(x)
1	
2	
3	
4	
5	



y-intercept _____ asymptote _____

domain _____ range _____

end behavior: as $x \rightarrow +\infty$, $f(x) \rightarrow$ _____ and

as $x \rightarrow -\infty$, $f(x) \rightarrow$ _____