GSE Algebra II Y

Coach Sansing

Graphing Exponential Functions Practice

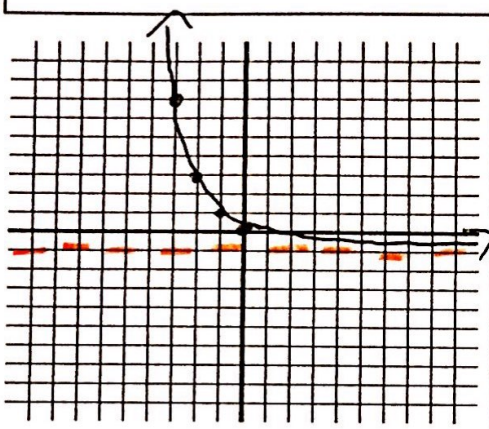
Name _____ **Date** _____

asymptote

1. $f(x)=\left(\frac{1}{2}\right)^x-1$ Growth or Decay? $b<1$

Domain: $(-\infty,\infty)$ Range: $(-1,\infty)$

Asymptote: $y=-1$ $x\to+\infty, f(x)\to -1$; $x\to-\infty, f(x)\to \infty$

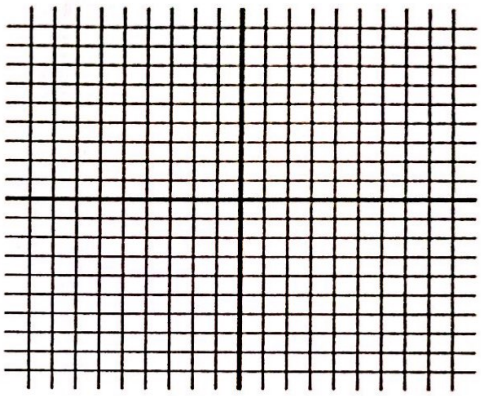


x	y
0	0
-1	1
-2	3
-3	7
-4	15

2. $f(x)=-\left(\frac{1}{3}\right)^x+3$ Growth or Decay?

Domain: _____ Range: _____

Asymptote: _____ $x\to+\infty, f(x)\to$ _____; $x\to-\infty, f(x)\to$ _____

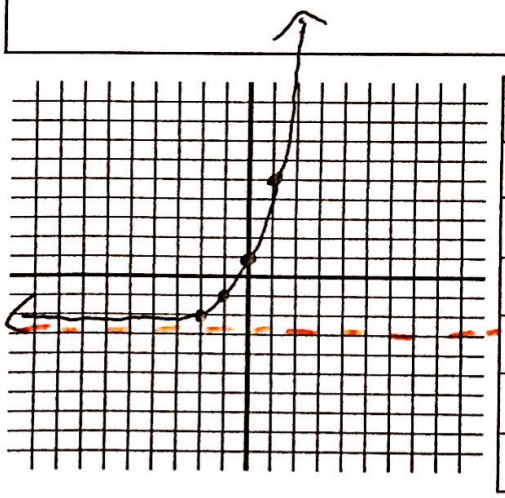


x	y

3. $f(x)=(2)^{x+2}-3$ Growth or Decay? $b>1$

Domain: $(-\infty,\infty)$ Range: $(-3,\infty)$

Asymptote: $y=-3$ $x\to+\infty, f(x)\to \infty$; $x\to-\infty, f(x)\to -3$

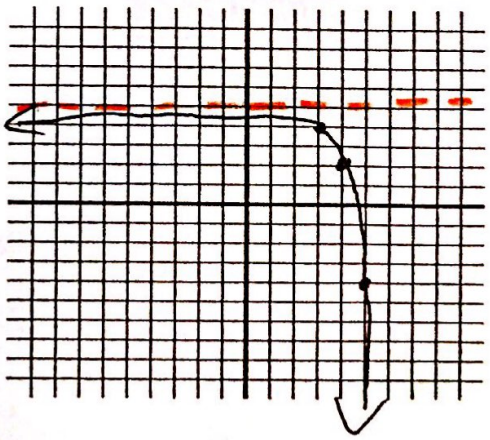


x	y
-2	-2
-1	-1
0	1
1	5
2	13

4. $f(x)=-(3)^{x-3}+5$ Growth or Decay? $b>1$

Domain: $(-\infty,\infty)$ Range: $(-\infty,5)$

Asymptote: $y=5$ $x\to+\infty, f(x)\to -\infty$; $x\to-\infty, f(x)\to 5$



x	y
3	4
4	2
5	-4
6	-22