Name:_____ Class:_____ Date:_____

Copy of 7-1: Graphing Exponential Functions (Practice)

Graph each function. State the domain and range.

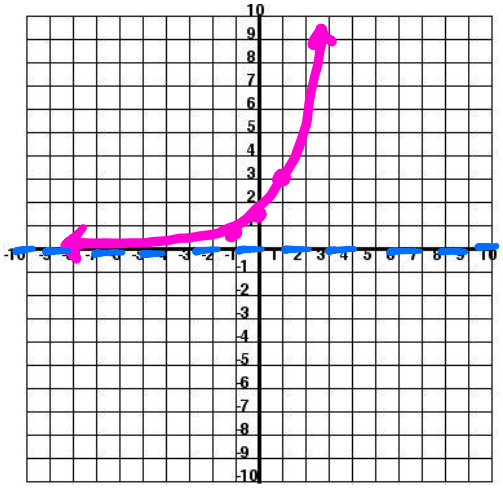
1. $y = 1.5(2)^x$

vert. stretch, sf: 1.5

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

Range: $(0, \infty)$

x	y
-1	3/4
0	1.5
1	3



4. $y = 5\left(\frac{1}{2}\right)^x - 8$

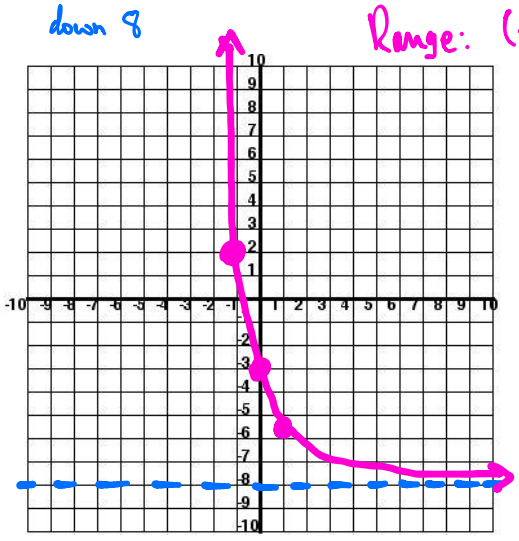
vert stretch, sf: 5

down 8

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

Range: $(-8, \infty)$

x	y
-1	2
0	-3
1	-5.5



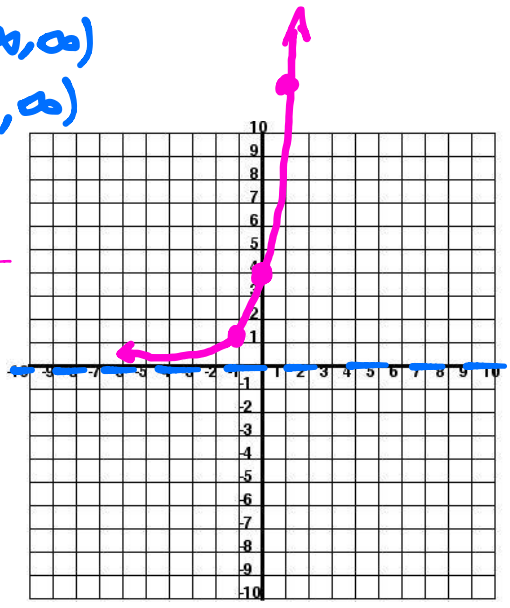
2. $y = 4(3)^x$

vert stretch, sf: 4

D: $(-\infty, \infty)$

R: $(0, \infty)$

x	y
-1	4/3
0	4
1	12



5. $y = -2\left(\frac{1}{4}\right)^{x-3}$

vert. refl.

vert. stretch, sf: 2

right 3

D: $(-\infty, \infty)$

R: $(-\infty, 0)$

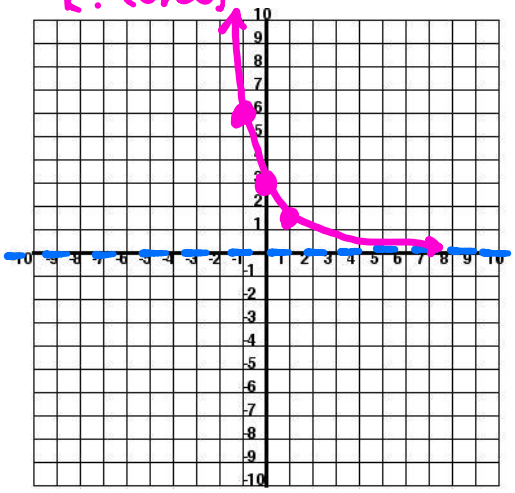
x	y
2	-8
3	-2
4	-1/2

3. $y = 3(0.5)^x$

vert. stretch, sf: 3

D: $(-\infty, \infty)$

R: $(0, \infty)$

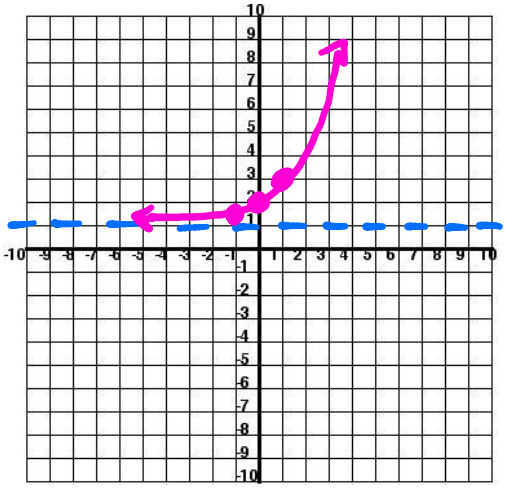


x	y
-1	6
0	3
1	1.5

6. $y = 2^x + 1$

up 1

D: $(-\infty, \infty)$; R: $(1, \infty)$



x	y
-1	1.5
0	2
1	3

7. **EDUCATION** A college with a graduating class of 4000 students in the year 2008 predicts that its graduating class will grow 5% per year. Write an exponential function to model the number of students y in the graduating class t years after 2008.

$A(t) = a(1 \pm r)^t$

$y = 4000(1 + .05)^t$

$y = 4000(1.05)^t$