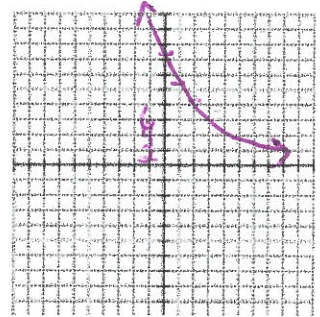


7.1-4 RWS #3

My Exponentials Test is

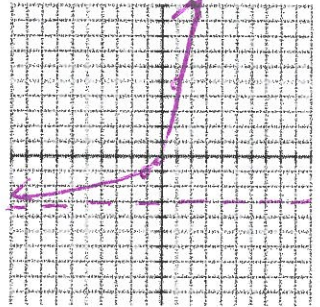
1. Give (2) points which are on the graph of $y = 15(.75)^x$
2. Give one point that is not on the graph in #1
 $(0,0)$ (lots)
3. a. Graph the equation from #1 on graph at right
b. What is the asymptote of the graph? $y=0$

x	y
-1	20
0	15
1	11.25
2	8.44



4. Give (2) points which are on the graph of $y = 4(2)^x - 3$
5. Give one point that is not on the graph in #4
 $(0,0)$ (lots)
6. a. Graph the equation from #4 on graph at right
b. What is the asymptote of the graph?

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



$y = -3$

7. Emma researched mutual funds and found one that earned 9% interest. She put all of her money, \$4000, in the account and plans to leave it there until she graduates college in 7 years.

- a. How much money will she have after college graduation?
 $\$7312.16$
- b. How much money did Emma's account earn?
 $7312.16 - 4000$ (original) = $\$3312.16$

$4,000 (1.09)^7$

8. A doctor gives you 15 mg of sodium pentothal, a truth serum. It is ultra-short-acting, about 60% of the serum dissipates every minute. Calculate the amount of serum left in your bloodstream after 3 minutes.

$15(.4)^3$ 96 mg

9. Jacob would like to have \$50,000 when he turns 40 (so he can throw a big party for all of his former teachers!) He has about 35 years to invest his money. If he found an account that earns 4.5% interest annually, how much must he invest now to have \$50,000 for the party?

$50,000 = b (1.045)^{35}$
 $50,000 = b (4.67)$ $\$10,706.64$

10. Please write an equation that relates the data for each situation.

a.

x	f(x)
-1	$\frac{4}{3}$
0	4
1	12
2	36
3	108

$y = 4(3)^x$

b.

x	1	2	3	4	5	6	7
y	10	13	18	21	26	29	34

1.3 5 4 5 3
neither linear or exponential

c.

Time (years)	Car's value (thousands)
0	32
1	27.2
2	23.1
3	19.65
4	16.70

$32(.85)^x = y$