Algebra 1
Finding Exponential Models

Name _____

Hour _____

Find the exponential model for each of the following.

1)

X	0	1	2	3	4
F(x)	5	15	45	135	405

1)_____

2)

X	3	4	5	6	7
F(x)	13.5	20.25	30.375	45.5625	68.34375

2)_____
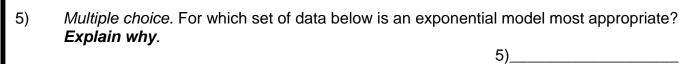
3)

X	2	4	6	7	9
F(x)	96	1536	24576	98304	1572864

3)_____

4)   A pharmaceutical company is testing a new anesthetic. They injected 14 mg of the anesthetic into the bloodstream of a laboratory rat and then monitored the level of the drug every hour. The results are in the table below.

Time (hr)	0	1	2	3	4	5	6	7	8	9
Anesthetic (mg)	14.00	9.38	6.28	4.21	2.82	1.89	1.27	.85	.57	.38

4)_____

5)   *Multiple choice.* For which set of data below is an exponential model most appropriate?
Explain why.

a.
x	0	1	2	3	4	5	6
y	3	18	75	390	1800	10,000	50,000

b.
x	0	1	2	3	4	5	6
y	3	15	75	375	1875	9375	46875

c.
x	0	1	2	3	4	5	6
y	3	6	99	732	3075	9378	23331