Name:_____ Per:_____ Date:_____

Exponential Functions

Find the exponential function that goes through the two given points

1. (0, 40) and (5, 100)	2. (0, 200) and (10, 25)
3. (2, 150) and (8, 15)	4. (4, 10) and (9, 250)

5. In $4000 is deposited in an account that is compounded monthly at a rate of 5.25% what will the value of the account be after 4 years?

6. In $2500 is deposited in an account that is compounded continuously at a rate of 8% what will the value of the account be after 36 months?

7. A group of birds are relocated to a new island, if there are 60 birds to start and they are projected to increase in population by 14% every 4 months, how many birds will there be in 2 years?

8. In $1100 is deposited in an account that is compounded continuously at a rate of 10.25% what will the value of the account be after 18 months?

9. If an element decays at a **constant** rate of 1.5% per day, if you start with 4000 grams how many grams will be left after 6 weeks?

10. If a company is offering an additional 8% discount each week on a piece of machinery worth 15,000 how much will the machine be worth in 5 months?

11. If the leaves fall off a tree at a rate of 5% daily and there are currently 50,000 leaves on a particular tree, how many leaves were there 15 days prior?

12. Big$$Balboni an private investing firm offers a CD at 5% compounded quarterly, if you invest $2,500 in this 3 year CD, how much will you have when you are ready to withdraw?

13. If there is a huge puddle of water 50 liters is continuously evaporating at a rate of 8% every hour. How much water will be left after 4 days?

14.

15. If on the 15^{th} day of school there have been 465 issued temp ID's and on the 23^{rd} day of school there were 735 temp ID's. Find the exponential function to fit this data. How many temp ID's will have been issued on the 40^{th} day of school?