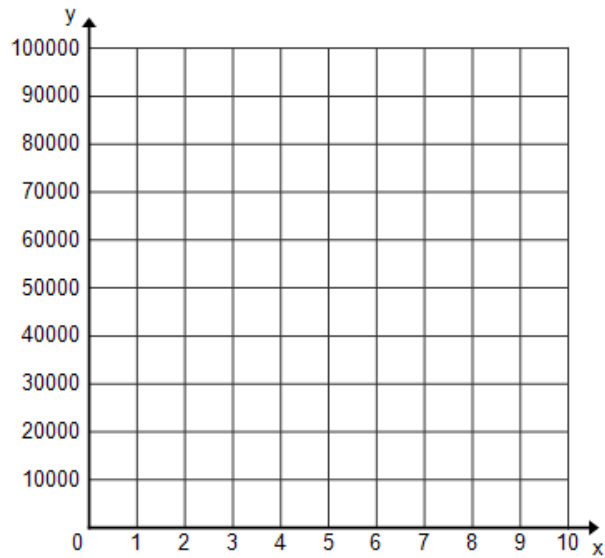


7. Draw a graph of the function.

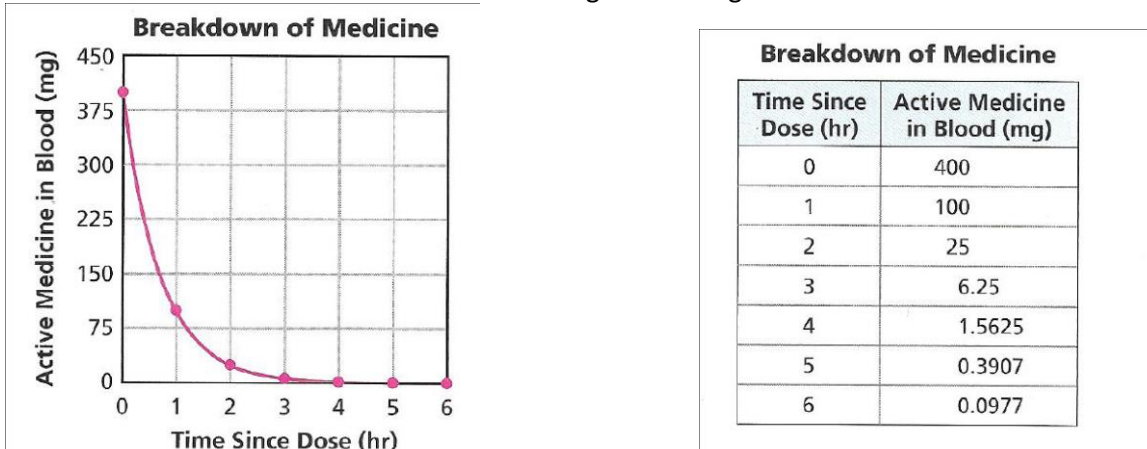


Tell whether the equation represents exponential decay or exponential growth:

8. $y = 0.345(1.06)^x$

9. $y = 345(0.87)^x$

After an animal receives a preventive flea medicine, the medicine breaks down in the animal’s bloodstream. With each hour, there is less medicine in the blood. The table and the graph show the amount of medicine in a dog’s bloodstream each hour for 6 hours after receiving a 400 milligram dose.

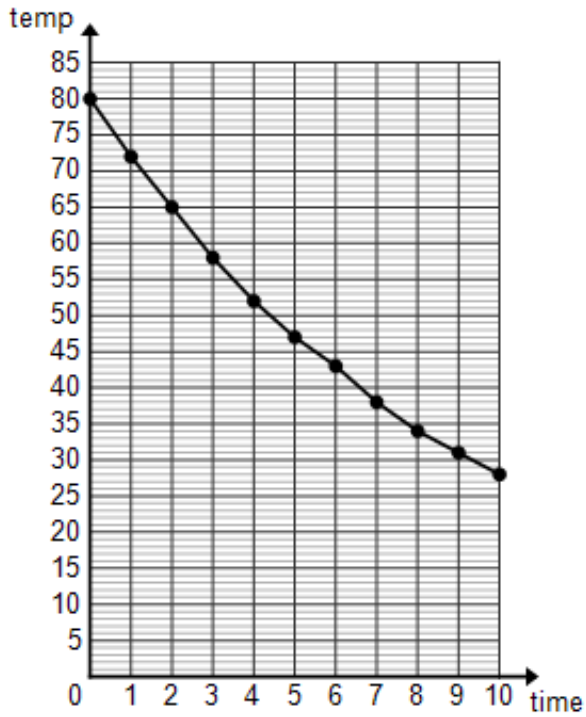


10. How does the amount of active medicine in the dog’s blood change from one hour to the next?

11. Write an equation to model the relationship between the number of hours h since the dose is given and the milligrams of active medicine m .

12. Dwayne was confused by the terms decay rate and decay factor. He said that because the rate of decay is 20%, the decay factor should be 0.2, and the equation should be $m = 60(0.2)^h$. How would you explain to Dwayne why a rate of decay of 20% is equivalent to a decay factor of 0.8?

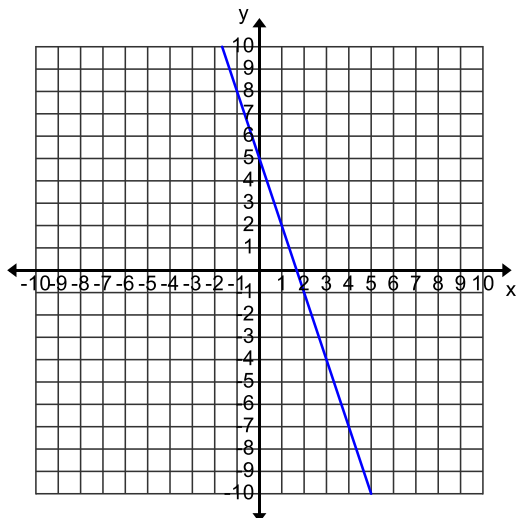
13. Hot cocoa is poured into a cup and allowed to cool. The difference between cocoa temperature and room temperature is recorded every minute for 10 minutes. Given the graph of this relationship, fill in the table, approximate the decay factor and use it to write an equation.



Time (min)	Temp Difference
0	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

14. Write two equations for each graph:

a)



b)

