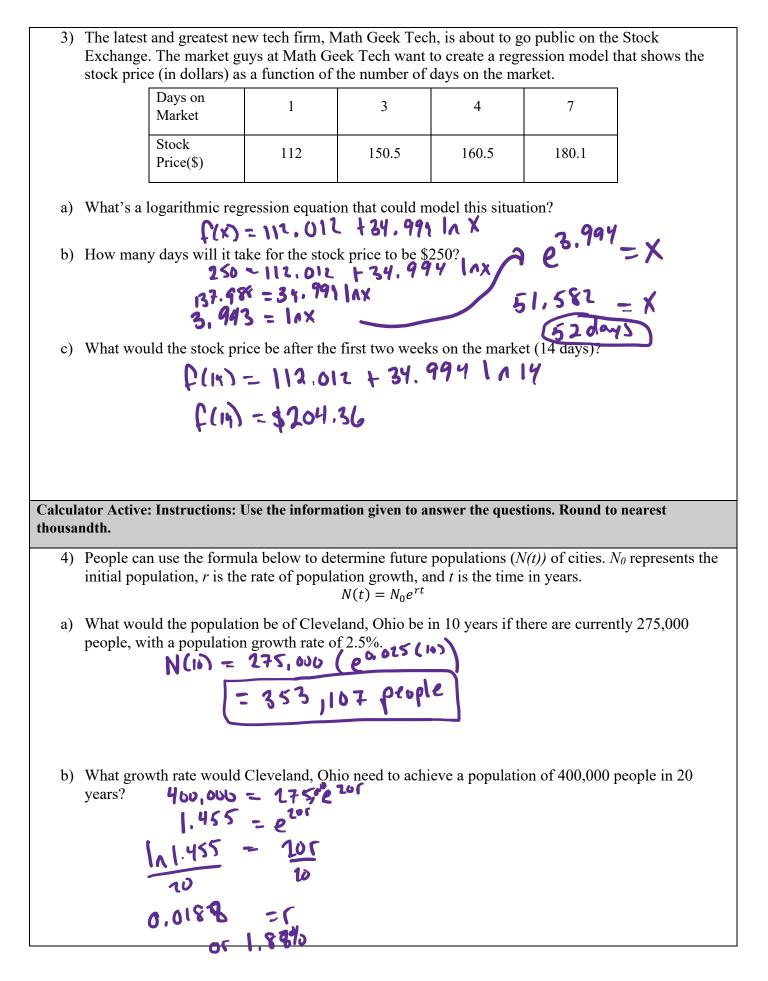
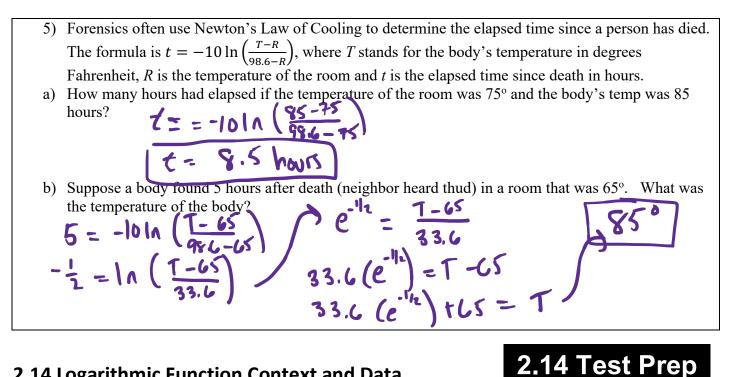
## 2.14 Logarithmic Function Context and Data Modeling

## **AP Precalculus**

	or Active: Instructio nearest thousandth		ita provided t	to find a regr	ession equation	on and answe	r the questions.
	Ir. Bean started lear ata to find a model	e	-	•		•	
	earned that day.		1 01 duys stu	aying us a h			
	# of Words Learned	10	32	79	197	400	
	# of days studying	1	6	10	14	17	
a) V	Vhat's a logarithmic	regression equation $= -9.03$				?	
b) H	T 1	11.41 0		1 1000	1.0	21.021	~ 21 days
c) H	Iow many words wo		if he studied				
	15.369	=1a¥ =X					
	+116,511 , WR85	= 1					
W	Ar. Sullivan recently veek he collects data quation that models	on the amou the pounds lo	nt of weight ost on a parti	he loses that cular week a	t week. He was a function of	ants to find a of the week n	a regression
	Week #	1		2	6	9	
	Pounds Lo that week	st 9.5	8	.5	6.5	5.5	
a) V	Vhat's a logarithmic	regression eq = 9.51				?	
b) V	Which week number	•			4.21	L	
		= 9.616	-		→ e"	= X	
	-7.6	16 = -1.	8081n×		67.5	= X	
c) H	Iow many pounds w		an lose durin	ing the $12^{\text{th}}$ w	eek?		
	- Fa	<u>h = 5.</u>	12 por	<u>ds</u>			

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## 2.14 Logarithmic Function Context and Data

- 6) The table presents values for a function, f, at selected values of x. A logarithmic regression is used to model the data. What is the value of f(4.5)?
  - (A) 35.225 (B) 34.987 (C) 54.639

F(x) = 44.932-6.454/1x

x	F(x)
1	44.9
3	37.9
7	32.4
9	30.7