



## Advanced Math

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50)  $n=1, A=\$45259.26$   
 $n=2, A=\$49561.44$   
 $n=4, A=\$51977.87$   
 $n=12, A=\$53700.66$   
 $n=360, A=\$54568.25$   
 Continuous,  $A=\$54598.15$

52)  $t=1, P=\$88692.04$   
 $t=10, P=\$3019.42$   
 $t=20, P=\$9071.80$   
 $t=30, P=\$2732.37$   
 $t=40, P=\$822.97$   
 $t=50, P=\$247.88$

53)  $A = Pe^{rt}$   
 $= 25000e^{(0.075 \cdot 25)}$   
 $A = \$222,822.57$

54)  $A = 5000e^{(0.075 \cdot 50)}$   
 $A = \$212605.41$

55) a)  $\rightarrow$  Simple interest is linear  
 Compound Interest is exponential

b)  $y_1 = 500(1 + \frac{.07}{1})^x$   
 $y_2 = 500(.07)(x) + 500$   $x_{\min} 0, x_{\max} 35$   
 $y_{\min} 0, y_{\max} 5000$

56)  $\$11,250$

57)  $23.95(1.04)^{10}$   
 $C = \$35.45$

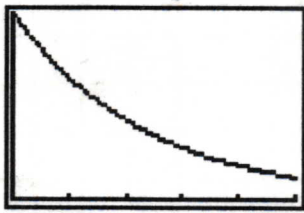
58) b)  $\$421.12$   
 c)  $\$350.13$

59) a) 100  
 b) 299.97  
 c) 899.8

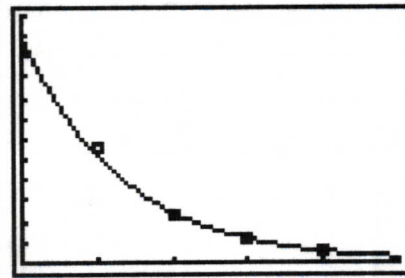
60) a) 3351  
 b) 4492

63) a) use  $x_{\min} = -5$   $y_{\min} = 0$   
 $x_{\max} = 25$   $y_{\max} = 12000$   
 use ExpReg ( $L_1, L_2, Y_2$ )

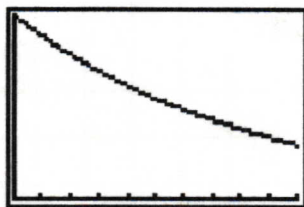
61) a) 25g  
 b) 16.297g



b)  $y = 10957.738742213(0.8608021183192)^x$



62) a) 10g  
 b) 7.851



c) 3303.3568

d) 11.347721