

Write a sentence

Station 1

Pg. 513 23 & 24

83) Invest \$3000. Which investment yields the greater return over 10 years @ 5% compounded semi-annually or @ 6% compounded continuously? How much more

84) How long to the nearest tenth of year will \$4000 grow to \$8000 at 5% annual interest compounded quarterly?

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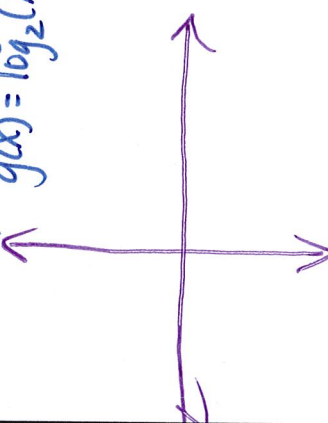
Station 3

# 2

Pg. 513

Graph  $f(x) = \log_2 x$   
 $g(x) = \log_2(x-1)$

- a) Graph
- b) State Asymptotes
- c) Domain
- d) Range



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Station 4

expand each log

Pg. 511 50-53

50.  $\log_6 36x^3$

51.  $\log_4 \left( \sqrt{\frac{x}{64}} \right)$

52.  $\log_2 \left( \frac{xy^2}{64} \right)$

53.  $\ln \sqrt[3]{x}$

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Station 2

19-29

Pg. 510  
 19.  $\log_4 64$

20.  $\log_5 \frac{1}{25}$

21.  $\log_3(-9)$

22.  $\log_{10} 4$

23.  $\log_{17} 17$

24.  $\log_3 3^8$

25.  $\ln e^5$

26.  $\log_3 \frac{1}{27}$

27.  $\ln \frac{1}{e^2}$

28.  $\log \frac{1}{1000}$

29.  $\log_3(\log_8 8)$

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**Station 7**

Solve each log  
Check for extraneous

Pg. 513 # 17, 18  
15.  $\log_6(4x-1) = 3$

17.  $\log x + \log(x+15) = 2$

18.  $\ln(x-4) - \ln(x+1) = \ln 6$

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**Station 5**

Condense each log

Pg. 511 54-57

54.  $\log_6 7 + \log_6 3$

55.  $\log 3 - 3 \log x$

56.  $3 \ln x + 4 \ln y$

57.  $\frac{1}{2} \ln x - \ln y$

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**Station 8**

Pg. 514 # 27

In 2010 population of Asia was 4121 Mill; In 2050, it is projected to be 5231 Mill. Write the exponential growth function that describes Asia, in millions,  $t$  years after 2010.

$$A = A_0 e^{kt}$$

**Station 6**

Pg. 513

11, 13 Solve

11.  $3^{x-2} = 9^{x+4}$

13.  $400e^{.005x} = 1600$

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★ Station C ★

Pg. 387 #20  
 Find all roots of  
 $x^3 - 5x^2 + 17x - 13 = 0$  by  
 knowing  $x-1$  is a factor. Hint  
 Synthetic divide

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★ Station A ★

Pg. 514 #26  
 $A = 82.3e^{-0.004t}$  Models the pop  
 of Germany, A, in Millions, t years  
 after 2010.  
 a) What is population of Germany in 2010?  
 b) Is the population increasing or decreasing?  
 Explain how you know  
 c) In which year will the population  
 of Germany be 79.1 million?

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★ Station D ★

Graph  $f(x) = -3\sqrt{x+3} + 4$

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★ Station B ★

Pg. 514 #28  
 $A = A_0 e^{-kt}$   
 half-life of Iodine-131 is 7.2  
 days. How long will it take  
 for a sample of this substance  
 to decay to 30% of its original  
 amount? First must find model by  
 solving for k. Then answer the  
 above question

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★ Station E ★

Solve

$$|4x - 1| = 7$$

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★ Station F ★

Graph  $f(x) = (x-4)^3$   
State Domain & Range

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★ Station G ★

Graph  $y = \log_3(x-3) + 6$

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★ Station H ★

Pg. 514 # 25  
What interest rate, to the nearest tenth of a percent, is required for an investment Subject to Continuous compounding to double in 10 years?  $A = Pe^{rt}$

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