

Give Pre - Test as part of tomorrow's test.
The test is short so it should work out.

taken from Telescope from space



I, HW Help →

See
your
LCA

- HW Questions

(85)

If $X = 7^y$
how is it written
in $y =$ form

$$y = \log_7(x)$$

(86)

Solve

$$n^3 = 49$$

$$\sqrt[3]{\quad} \quad \sqrt[3]{\quad}$$

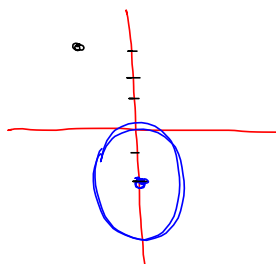
$$n = \sqrt[3]{49}$$

$$\approx 3.66$$

87) $x^2 + y^2 = r^2$

$x^2 + (y+2)^2 = (r)^2 \rightarrow$ center is $(0, -2)$

Transform 2 left
 5 up
 radius doubled



91

$$\textcircled{b} \quad xy^2 - 8z^2$$

$$(\quad)^2 - (\quad)^2 =$$

$$n^2 - 9 =$$

$$(\quad)^2 - (\quad)^2$$

$$\textcircled{91} \textcircled{a} x^2 + 8x$$

$$x(x+8)$$

$$\textcircled{b} \begin{matrix} x^2 y^2 - 8z^2 \\ (xy)^2 - (2z)^2 \end{matrix}$$

$$(xy+2z)(xy-2z)$$

$$\textcircled{c} \begin{matrix} x^2 + 14x - 16 \\ 2(x^2 - 7x - 8) \end{matrix}$$

$$2(x+8)(x-1)$$

$$\textcircled{d} 3x^2 - 11x - 4$$

$$(3x+1)(x-4)$$

$$(97) \quad (a) \quad \log_x(25) = 1$$

$$x = 25$$

$$(b) \quad x = \log_3(9)$$

$$x = 2$$

$$(c) \quad 3 = \log_7(x)$$

$$x = 343$$

$$\textcircled{d} \quad \log_3(x) = \frac{1}{2}$$

$$x = \sqrt{3}$$

$$\textcircled{e} \quad 3 = \log_x(27)$$

$$x = 3$$

$$\textcircled{f} \quad \log_{10}(10000) = x$$

$$x = 4$$

$$92b \quad \frac{1}{x+2}$$

$$92d \quad \frac{4x+16}{x(x+2)}$$

$$92b \quad \frac{3}{(x+2)(x+3)} + \frac{x}{(x+2)(x+3)}$$

$$\text{LCD} \rightarrow \frac{\cancel{(3+x)}}{(x+2)\cancel{(x+3)}}$$

$$\frac{1}{x+2}$$

103

a. $y = a b^x$

$a = \frac{y}{b^x}$

b. $y = a b^x$

$\frac{y}{a} = b^x$

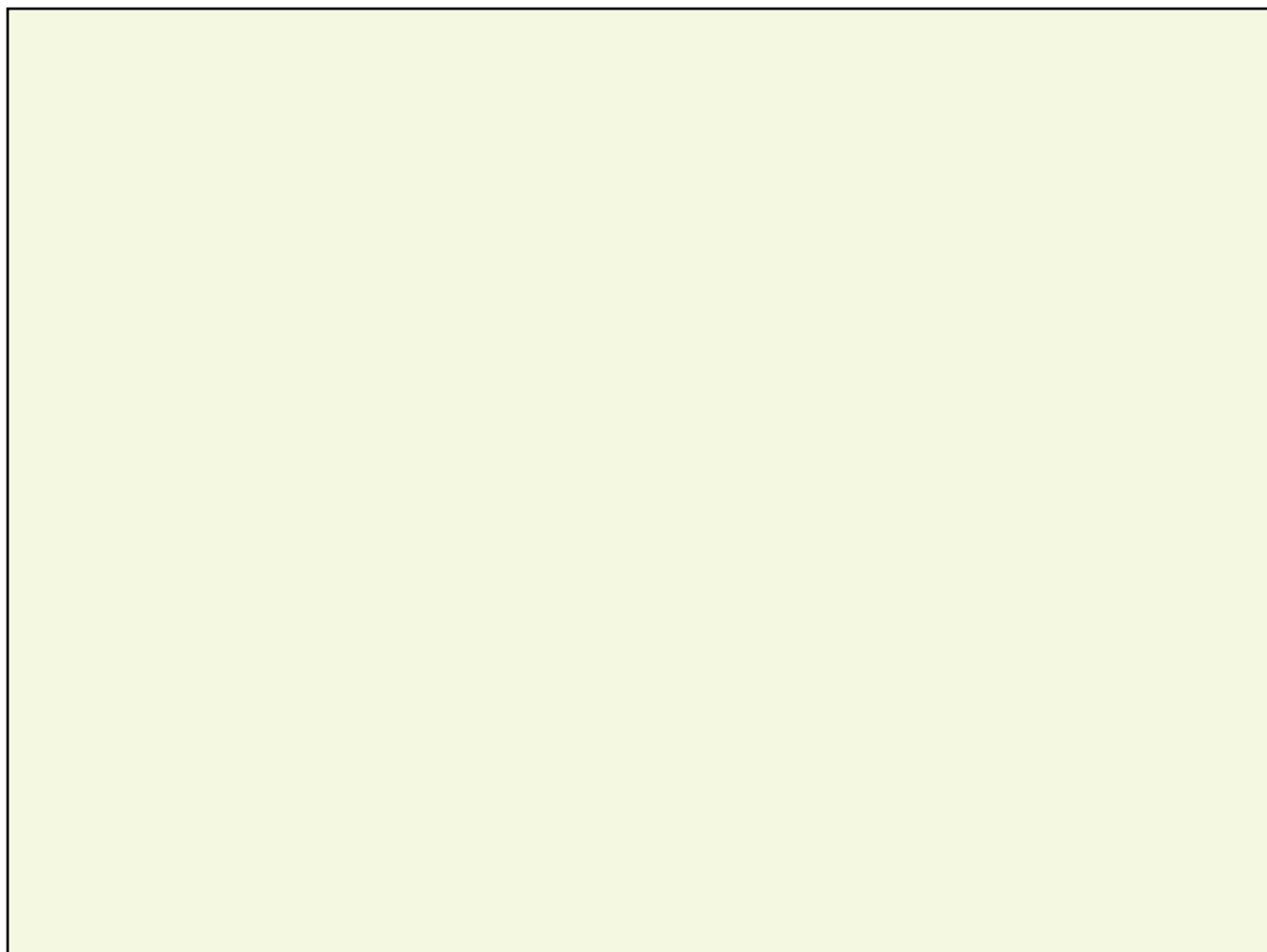
$\sqrt[x]{\frac{y}{a}} = b$

$b = \sqrt[x]{\frac{y}{a}}$

92d

$$\frac{4x+16}{x^2+2x}$$

Sketching of Parent Functions
Blending in what you already knew with what
you know now.



Without a GDC, sketch the following:

$$f(x) = x^2$$

$$g(x) = x^3$$

$$j(x) = \frac{1}{x}$$

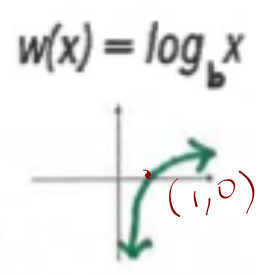
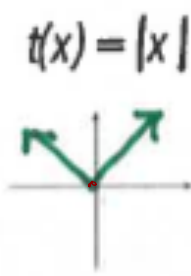
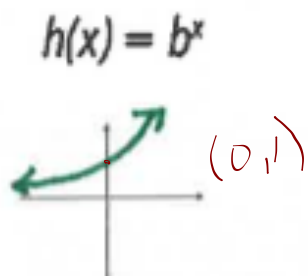
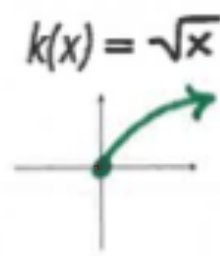
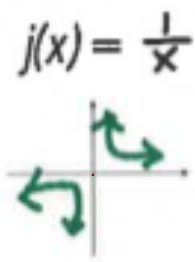
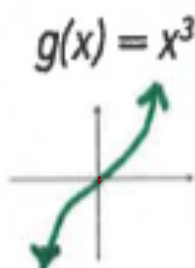
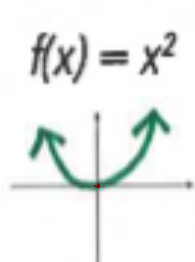
$$k(x) = \sqrt{x}$$

$$h(x) = b^x$$

$$t(x) = |x|$$

$$w(x) = \log_b x$$

Use the bottom of the warm up



some review from
previous chapter
content.

1. Calculate the the future value of an investment of \$5000 for 10 years if a bank pays interest monthly and assume the annual interest rate is 6.5%.

$$FV = 5000 \left(1 + \frac{.065}{12} \right)^{(12 \cdot 10)} \approx \$ 9,560.\underline{92}$$

Repeat the calculation if you left the money for 20 years instead.

$$FV = 5000 \left(1 + \frac{.065}{12} \right)^{12 \cdot 20} \approx \$ 18,282.\underline{23}$$

2. Practice your fluency with logarithms (*no calculators*) by calculating each expression supporting exponential statement.

$$\log_7 49 = \underline{2}$$

because:

$$7^2 = 49$$

$$\log_{49} 7 = \frac{1}{2}$$

because:

$$49^{\frac{1}{2}} = 7$$

$$\sqrt{49}$$

$$\log_{10} 0.1 = \underline{-1}$$

because:

$$10^m = 0.1$$

$$10^m = \frac{1}{10}$$

$$10^m = 10^{-1}$$

Circle your answers.

$x = \log_3 8$

$$3^x = 8$$

$\log_{10} x = 4$

$$10^4 = x$$

$m = e^t$

$$\log_e(m) = t$$

$$\frac{m = 4e^t}{4 \quad 4}$$

$$\frac{m}{4} = e^t$$

$n + 1 = \log_6 50$

$$6^{(n+1)} = 50$$

$$\frac{1^n}{2} = \frac{1}{8}$$

$$\log_{\frac{1}{2}}\left(\frac{1}{8}\right) = n$$

$$\log_e\left(\frac{m}{4}\right) = t$$

4. Find the inverse equation, in "y=" form, of the following function. Use proper notation show proper detail.

$$f(x) = 3^x$$

$$f^{-1}(x) = \log_3 x$$

$$y = 3^x$$

$$x = 3^{\boxed{y}}$$

write as a
log equation

$$y = \boxed{\log_3 x}$$

Find the inverse. Write in graphing form ($y =$)

$$y = \frac{1}{2} (4)^x - 6$$

switch
 $x \leftrightarrow y$

$$x = \frac{1}{2} (4)^y - 6$$

$$x + 6 = \frac{1}{2} (4)^y$$

$$4^y = 2(x + 6)$$

$$y = \log_4 2(x + 6)$$

4. Simplify completely. $\frac{4x^2-9}{x-5} \cdot \frac{5-x}{4x+6}$

diff. of squares

2 is common

FACTOR FACTOR FACTOR FACTOR

$$\frac{(2x+3)(2x-3)}{x-5} \cdot \frac{5-x}{2(x+3)} \Rightarrow \frac{2x-3}{x-5} \cdot \frac{5-x}{2} \Rightarrow \frac{2x-3}{x-5} \cdot \frac{-(x-5)}{2}$$

↓

$$-\frac{2x-3}{2}$$

$$x = b^y$$

$$y = \log_b(x)$$

- Tomorrow....Turn in your homework packet in the white basket.
- Turn in your textbook (Volume 1) either today or tomorrow before period 1.

Rules for Tests

- No bathroom trips during test. after your test is turned in maybe.....
- Hats backward, no hoods
- Calculator covers put away/ No writing on GDC's
- If you are going to use the notes option, you have to have them out before you look at the test.

To Prepare

Be able to do the assigned HW problems

Closure Assignment will review some, but not all, of the skills and concepts

Review all in-class worksheets, Notes and Warm Ups

You can use your GDC. I will not tell you how to use it during the test unless there is some unusual situation.

Be responsible and either have working batteries or get it charged ahead of time.

GDC

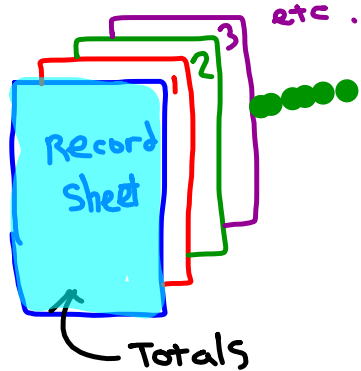
Should be able to draw the inverse of a function on your GDC

Turning in HW

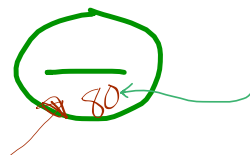
All assignments that you've done get turned into me, then I hand you the test.

15¢ penalty per day if packet is late

staple



Tonight's Closure assignment will be the last in the packet.



ASSIGNMENTS

Closure Assignment

Page.... 250.. **CL5-....126-131, 133-135** ✓

Will be added to the HW for tomorrow.

131a

$$\frac{5x}{x+3} + \frac{3+x}{x^2-9}$$

mistake
should be a -

on 130b.... use graphing methods to get an approx answer.

BB

128 D

$$10^{\log_{10}(x)} = x$$

$$10^m = x$$

