

Unit 3 Day 10

Quiz 2 Day
and Practice

Warm Up Day 10

Solve the following equations.

1. $2b^{5/3} - 7 = 479$ $b = 27$

2. $-46 = -2(33 - 2m)^{3/4} + 8$ $m = -24$

3. The half-life of Zn-71 is 2.4 minutes. If one had 100.0 g at the beginning, how many grams would be left after 7.2 minutes has elapsed? 12.5 g

4. $-5(b - 20)^{5/4} = -1215$ $b = 101$

5. Write an exponential function for a graph that includes the points $(2, 17)$ and $(5, 22.5)$. ← Change these pts!

$y = 14.10(1.0979)^x$

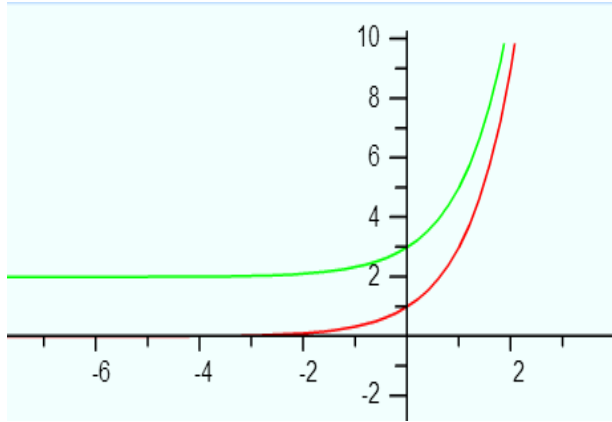
Tonight's Homework

Packet p. 19-21 EVENS
and P. 24-27 STARRED PROBLEMS



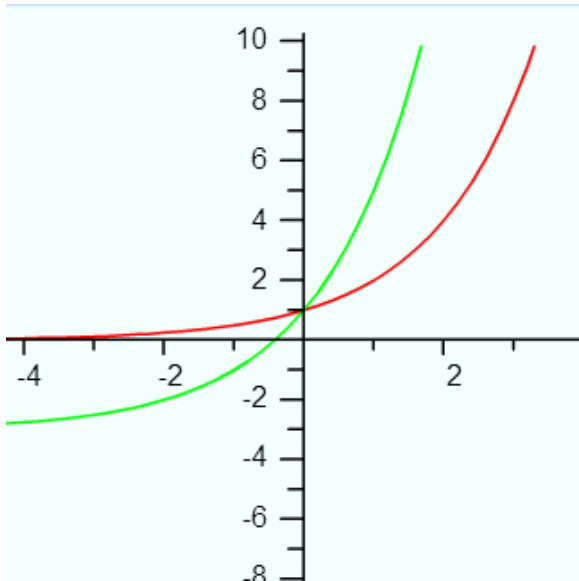
Homework Answers – Red Graph is Parent Graph Green one is the Translated Graph

1.



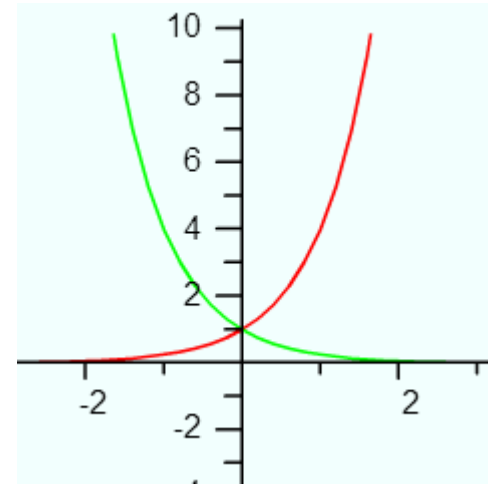
Comparison: Translated up 2

2.



Comparison: Translated left 2 and down 3

3.



Comparison: reflected over the y-axis

HW continued...

- 4.) Translated up 2
- 5.) reflected over the y-axis & translated down 1
- 6.) right 4, down 5
- 7.) Translated left 2 and up 3
- 8.) reflected over the x-axis
- 9.) Translated down 4

HW continued...

1.) $y = 3x - 3$

2.) $y = 2x - 10$

3.) $y = \frac{1}{2}x - \frac{5}{2}$

4.) $y = (4x)^{1/2}$

5.) $y = (x - 2)^{1/2}$

6.) $f(x) = x - 2$

7.) $y = x/3 - 1$

8.) $f(x) = (-x - 3)^{1/2}$

9.) after about 17 years so $1992 + 17 = 2009$

Review (if time allows)

Notes p. 39

Find the solution to each equation algebraically.

1) $\sqrt{20x - 6} = \sqrt{5x + 39}$

2) $2(x - 2)^{\frac{2}{3}} - 8 = 192$

3) $(x + 7)^{\frac{1}{2}} - x = 5$

4) Your new painting is valued at \$2400. It's value depreciates 7% each year. The value is a function of time.

- Write a recursive (next-now) equation for the situation
- Write an explicit function for the situation
- When will the painting be worth \$1000?

5) Graph $y = 2^{x+4} - 3$. Identify the domain, range, asymptotes, and transformations of the parent function $y = 2^x$.

Review ANSWERS

Review

Find the solution to each equation algebraically.

$$1) \sqrt{20x - 6} = \sqrt{5x + 39}$$

$$x = 3$$

$$2) 2(x - 2)^{\frac{2}{3}} - 8 = 192$$

$$x = 1002$$

$$3) (x + 7)^{\frac{1}{2}} - x = 5$$

$$x = -3$$

Review ANSWERS

4) Your new painting is valued at \$2400. It's value depreciates 7% each year. The value is a function of time.

a) Write a recursive (next-now) equation for the situation

$$\text{NEXT} = \text{Now} * (.93) \quad \text{start} = 2400$$

b) Write an explicit function for the situation

$$y = 2400(.93)^x$$

c) When will the painting be worth \$1000?

During year 12

5) Graph $y = 2^{x+4} - 3$. Identify the domain, range, asymptotes, and transformations of the parent function $y = 2^x$.

Domain: All real #s

HA: $y = -3$

Range: $y > -3$

Transformation: Left 4, down 3

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