

Thursday, January 31, 2013

Agenda:

- TISK, No MM
- HW Check
- Lesson 12-6: Exponential Functions part 1
- Homework: Ch 12 HW Packet #2, §12-6 problems
(We will also work on these problems tomorrow.)

TISK Problems

1. Write an equation in slope-intercept form for a line that passes through the points $(-2, 1)$ and $(4, 7)$.
2. Miss Wiltjer places the names of 28 students in a hat. Twelve of the names are girls and the rest are boys. Find the probability of choosing a boys' name then a girls' name if she doesn't replace the first name drawn.
3. Write and solve a proportion:
Eighteen is what percent of 40?

Ch 12 Quiz | Stats

- 7D
 - Class Average: 81.5%
 - Class Median: 83.8%
 - High Score: 100%
 - Low Score: 31%
- 7B
 - Class Average: 83.4%
 - Class Median: 88.1%
 - High Score: 100%
 - Low Score: 49%
- 7C
 - Class Average: 80.2%
 - Class Median: 84.2%
 - High Score: 100%
 - Low Score: 41%

Homework Check

13. $f(x) = \frac{5}{3}x - 2$
14. $f(x) = -2x + 4$
15. $f(x) = 3x + 2$
16. $f(x) = \frac{1}{2}x + 2$
17. $s(h) = 400 + 15h$
 $s(7) = 505$
18. $w(m) = 1200 - 45m$
 $w(15) = 525$

§12-6 Exponential Functions

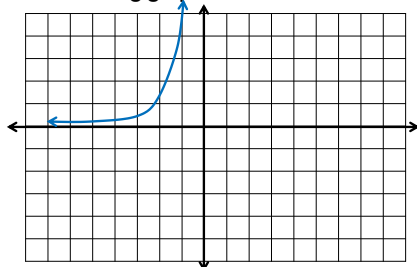
- Another type of function is called an **exponential function**.
 - Exponential functions either get *really big, really fast* or they get *really small, really fast*
- How can you tell if a function is exponential?
 - Look at its graph.
 - Look at its equation.

§12-6 Exponential Functions

- Equations that are exponential use the following rule:
 - $f(x) = p \cdot a^x$
 - x has to be in the **exponent!**
 - a and p are numbers and
 - a is greater than 0 (and not equal to 1)

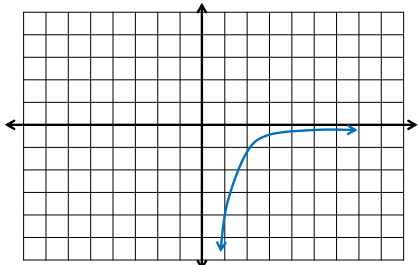
§12-6 Exponential Functions

- Exponential functions can look like one of the following graphs:



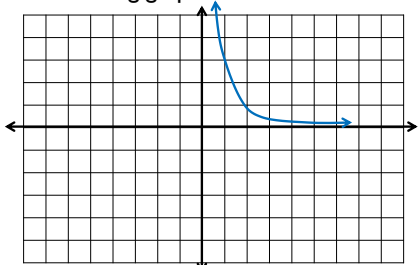
§12-6 Exponential Functions

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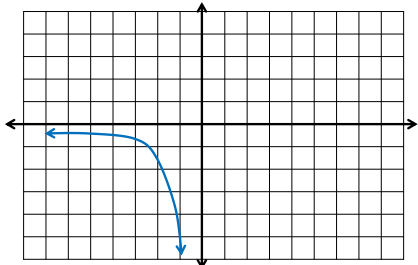
§12-6 Exponential Functions

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§12-6 Exponential Functions

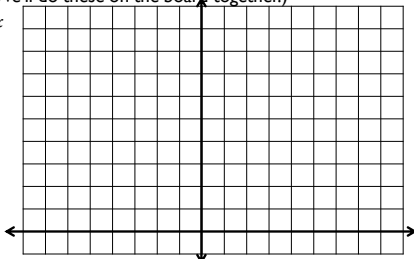
- Exponential functions can look like one of the following graphs:



§12-6 Exponential Functions

- So how can you tell which one of the graphs it is?
- Make a table of values and graph it!
- (We'll do these on the board together.)

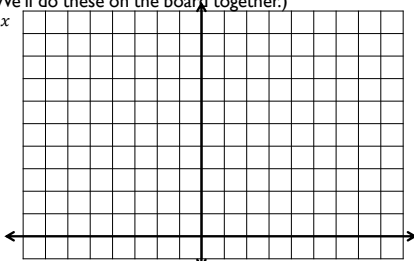
$$f(x) = 2 \cdot 3^x$$



§12-6 Exponential Functions

- So how can you tell which one of the graphs it is?
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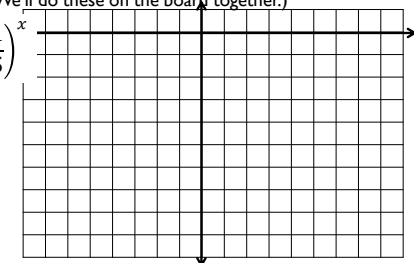
$$f(x) = 3 \cdot \left(\frac{1}{4}\right)^x$$



§12-6 Exponential Functions

- So how can you tell which one of the graphs it is?
- Make a table of values and graph it!
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$$f(x) = -4 \cdot \left(\frac{1}{5}\right)^x$$



§12-6 Exponential Functions

- So how can you tell which one of the graphs it is?
 - Make a table of values and graph it!
 - (We'll do these on the board together.)

$$f(x) = -\frac{1}{4} \cdot 2^x$$

