Tips to Improve Your Grade

Do your homework the night I assign it!!!

Come with questions the next day!! (You can't have questions if you don't do your homework...)

Don't wait until the due date or a day or 2 before the test to try to figure every thing out.

The second you get lost, come get help or you'll get more lost...

Don't waste your time in here!!! (I can't help you at home...)

Coming up in Pre-Calculus...

Today: 3.1 Tomorrow: 3.2a Thursday: 3.2b Friday: 3.1/3.2 Recap

Feb 15-12:25 PM Feb 2-11:26 AM

3.1 :: Exponential Functions and their Graphs

Exponential Functions

Parent function: $y = b^x$ Exponential Growth: $y = b^x$ Exponential Decay: $y = a^x$ $y = a^x$

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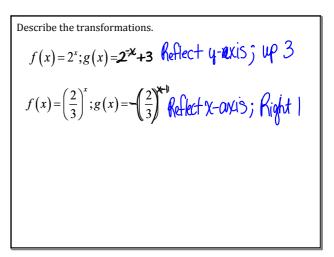
Review of some TRANSFORMATIONS! Assume c is positive.

Adding/Subtracting = Vertical/Horizontal
Adding c on the outside of the pf: $y = 2^x + 5$ wp 5
Subtracting c on the outside of the pf: $y = (\frac{2}{3})^x - 1$ down
Adding c on the inside of the pf: $y = (\frac{1}{3})^x + \frac{1}{3}$ Subtracting c on the inside of the pf:

Multiplying by a negative = Transfer of the pf:

A negative on the outside of the pf:

A negative on the inside of the pf: $y = (\frac{1}{3})^x + \frac{1}{3} + \frac{1$



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"Use a graphing utility to construct a table of values..."

How many values?? Give me at least 7.

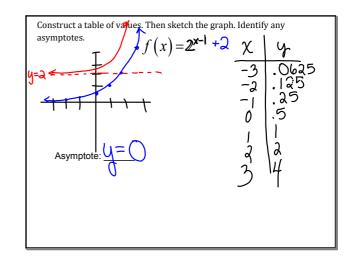
To create a table:

• Type your function into the y= editor

• Go to 2nd WINDOW and make sure your independent variable is set to(ASK)

• Go to 2nd GRAPH and input 7 different x-values to find the corresponding y-values.

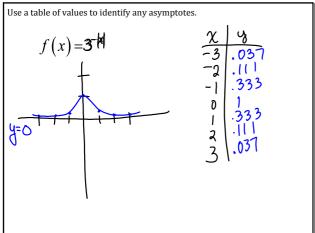
• Viola! You've constructed your table.



What happens as x→∞?

 $(1+\frac{1}{x})^x \rightarrow 2.718$

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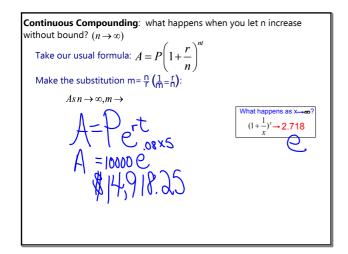
A very special number...

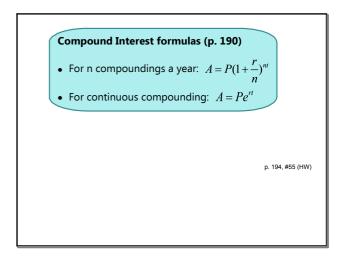
0

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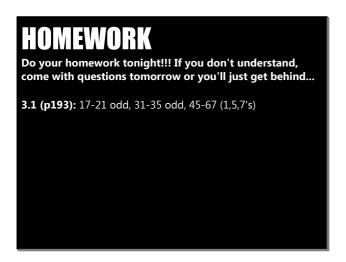
Say your money is compounded n times a year. Then $A = P \left(1 + \frac{r}{n} \right)^{n+1}$
Example
A sum of \$10,000 is invested in a fund where interest is 8%, compounded
semiannually. Find the amount of money in the account after 5 years.
$A = 10000 \left(1 + \frac{.08}{2}\right)^{3.5}$
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