Exponential Functions

Hw #
Omega 2A

Use a calculator to evaluate each expression to the nearest ten thousandth.

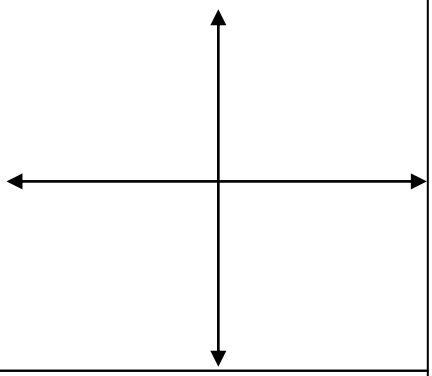
#1) $7^{\sqrt{5}}$ #1

#2) $8^{\sqrt{3}}$ #2

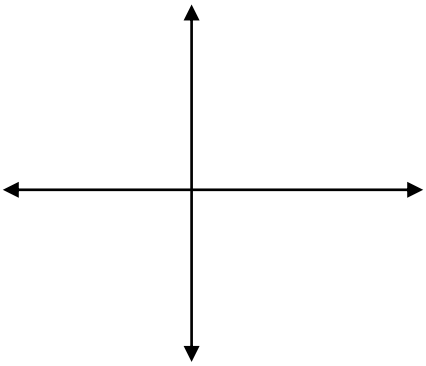
#3) $5^{\sqrt{10}}$ #3

Graph each equation using the parent graph.

#4) $y = 3^x$



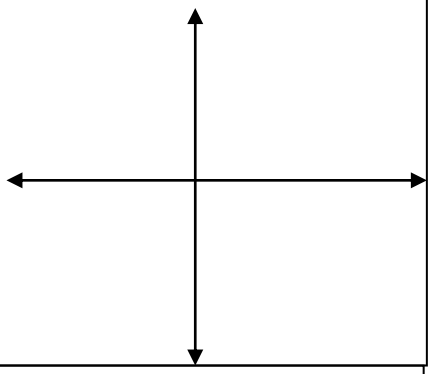
#5) $y = \left(\frac{1}{3}\right)^x$



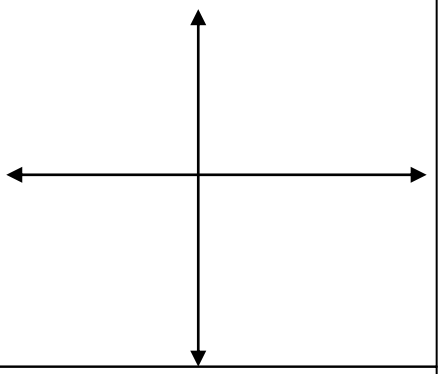
#6) Compare and contrast the graphs from example #4 and #5.

Exponential Functions

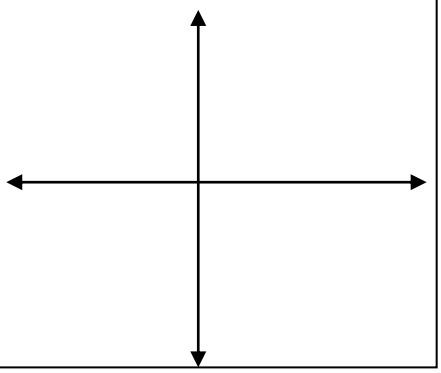
#7) $y = 5^{-x}$



#8) $y = 3^{-x}$



#9) $y = -3^{x}$



Exponential Functions

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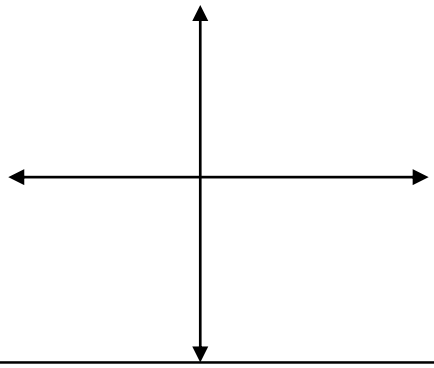
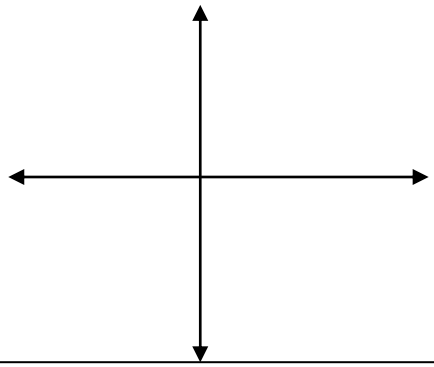
#10) $y = \left(\frac{1}{5}\right)^x$

#11) $y = 2^{x+3}$

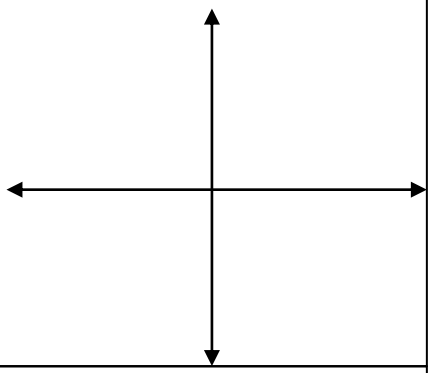


#12) $y = -2^{x+3}$

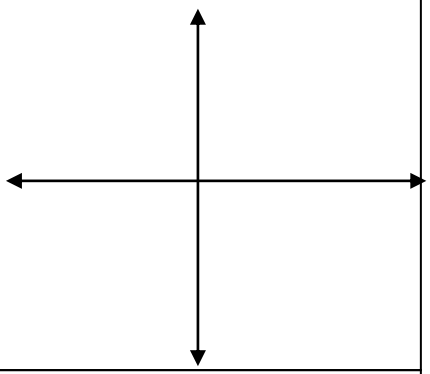


Exponential Functions

#13) $y = -2^{x-3}$



#14) $y \leq \left(\frac{1}{2}\right)^x$



#15) What is the future value of an annuity if $1000 is deposited into an account paying 6% every six months for 12 years?

Exponential Functions

Hw #
Omega 2A

#16) The state of Ohio offers its lottery winners a choice of prizes, with the jackpot amount paid in equal annual payments over 26 years or the present value of the annuity in one lump sum. If Mr. Arthur won a $4.5 million jackpot, how much would its lump-sum payment be? The interest rate used to find the present value is the yearly rate of inflation which is 5%.

#17) The Millers are saving for their daughter's college education. If they want to add $20,000 to her college fund at the end of five years, how much should they deposit each month into an account with an APR of 6.12%?

Exponential Functions

1) 77.5705
2) 36.6604
3) 162.3070
4) Use Calculator to check answer
5) Use Calculator to check answer
6) The graphs are reflections of each other over the y-axis.
7) Use Calculator to check answer
8) Use Calculator to check answer
9) Use Calculator to check answer
10) Use Calculator to check answer
11) Use Calculator to check answer
12) Use Calculator to check answer
13) Use Calculator to check answer
14) Use Calculator to check answer
15) $34,426.47
16) $2,488,012.84
17) $285.77