

# C12 - 7.1 - Simplifying/Solving Exponents HW

Simplify

$$\frac{2^8 \times 2^{-3}}{16} =$$

$$\frac{8^{-1} \times 32^4}{64^{-2}} =$$

*Solve for x*

$$2^x = 16^2$$

$$3^x 3 = 3^5$$

$$4^{x+1} = 2 \times 8^{2x-5}$$

$$64^{x+1} = 4^{2x}$$

$$5^{x^2-x} = 1$$

$$3^{x^2-x} = 9$$

Remember: Don't forget to check your answer.

# C12 - 7.1 - Simplifying/Solving Exponents HW

Simplify

$$\frac{4^8 \times 2^5}{32} =$$

$$\frac{2^{-1} \times 16^{-4}}{128^{-2}} =$$

*Solve for x*

$$3^x = 27^2$$

$$5^x 5^2 = 5^5$$

$$\left(\frac{1}{3}\right)^{-x-1} = 27^{2x-8}$$

$$16^{2x+1} = 2^{2x}$$

$$5^{x^2-5} = 625$$

$$7 \times 3^{2x^2+5x} = \frac{7}{9}$$

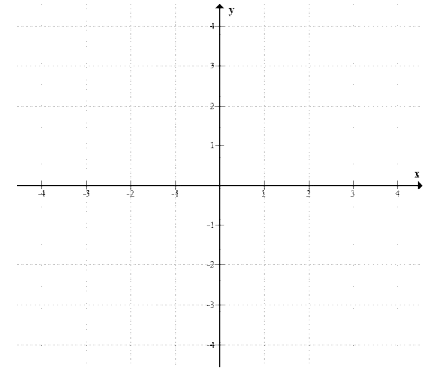
Remember: Don't forget to check your answer.

# C12 - 7.2 - Exponent $2^x$ Reflections Graphs HW

Draw the following graphs using a table of values.

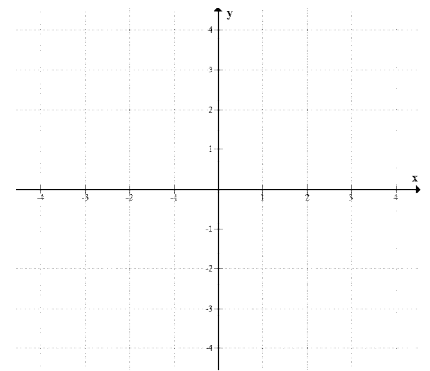
$$y = 2^x$$

$x$	$y$
-1	
0	
1	
2	



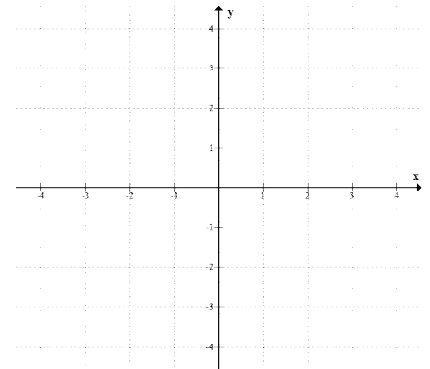
$$y = 2^{-x}$$

$x$	$y$
-2	
-1	
0	
1	



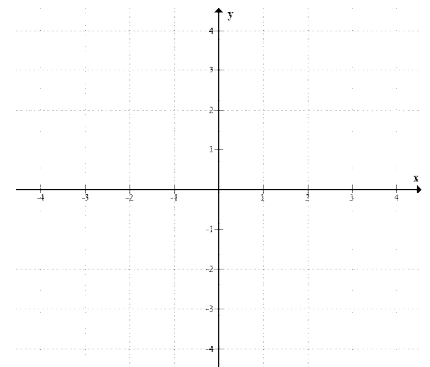
$$y = -2^x$$

$x$	$y$
-1	
0	
1	
2	



$$y = -2^{-x}$$

$x$	$y$
-2	
-1	
0	
1	

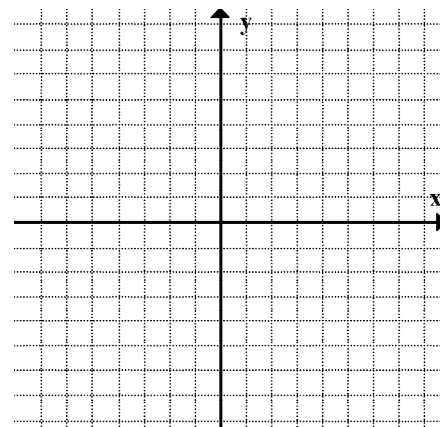


# C12 - 7.2 - Exponent $3^x$ Reflections Graphs HW

Draw the following graphs using a table of values.

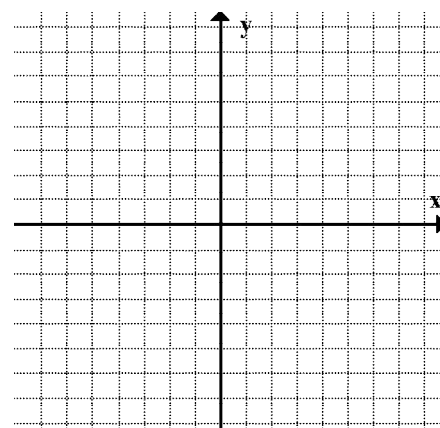
$$y = 3^x$$

$x$	$y$
-1	
0	
1	
2	



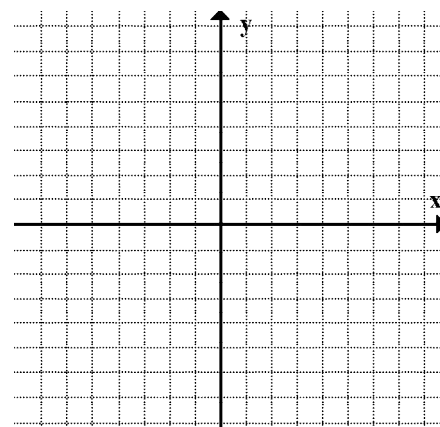
$$y = 3^{-x}$$

$x$	$y$
-2	
-1	
0	
1	



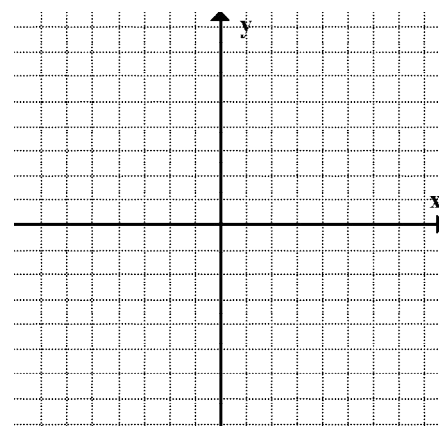
$$y = -3^x$$

$x$	$y$
-1	
0	
1	
2	



$$y = -3^{-x}$$

$x$	$y$
-2	
-1	
0	
1	

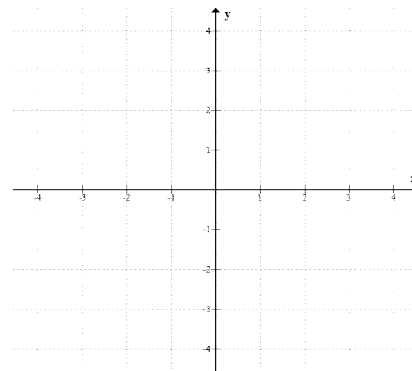


# C12 - 7.2 - $2^x$ Translations Reflections Graphs HW

Draw the following graphs using a table of values.

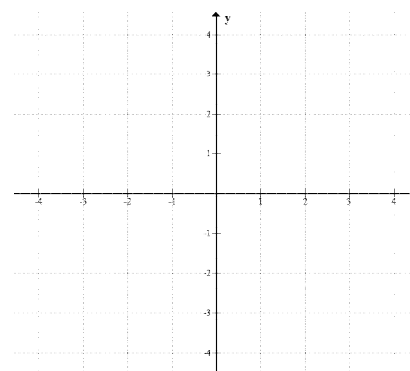
$$y = 2^x + 1$$

$x$	$y$
-1	
0	
1	
2	



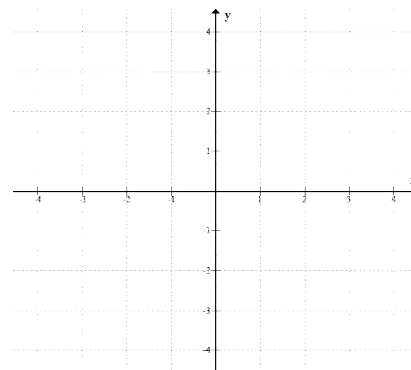
$$y = 2^{-x} - 2$$

$x$	$y$
-2	
-1	
0	
1	



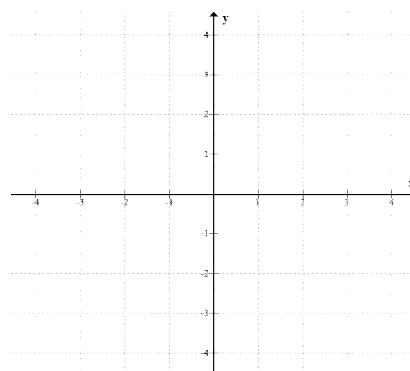
$$y = -2^{x+1}$$

$x$	$y$
-1	
0	
1	
2	



$$y = 2^{-x+2} - 2$$

$x$	$y$
-2	
-1	
0	
1	



## C12 - 7.3 - Word Problems HW

If you deposit \$1000 in the bank for five years at 10% interest how much will you have after 5 years?

If you deposit \$2000 in the bank for five years at 8% interest how much will you have after 10 years?

If you deposit \$5000 in the bank for five years at  $\frac{1}{2}\%$  interest how much will you have after 50 years?

If you deposit \$100 in the bank, how long will it take to grow to \$51200 if it doubles each year?

How many times as intense is an earthquake of 7.0 than 4.0?

An earth quake in California of Richter 8.5 Magnitude was 100 times as strong as an earth quake in Vancouver of what Richter Magnitude.

If you deposit \$3000 in the bank for five years at 12% interest, compounded monthly, how much will you have after 8 years?

If you deposit \$8000 in the bank for five years at 4% interest, compounded quarterly, how much will you have after 2 years?

If a population starts at 100 and doubles every five hours, how large will the population grow in 20 hour?

If a population starts at 1000 and halves every 2 hours, how small will the population shrink in 20 hour?

If the population starts at 300 and grows continuously at a rate of 0.6, how large will it grow after 20 days?

If the population starts at 5 and grows continuously at a rate of 0.2, how large will it grow after 100 days?