

Name: \_\_\_\_\_

1. Given the following three functions represented in the tables, identify whether the function is linear, exponential, parabolic, or none of these.

a.

$x$	$y = f(x)$
-1	5
0	2
1	-1
2	-4
3	-7

b.

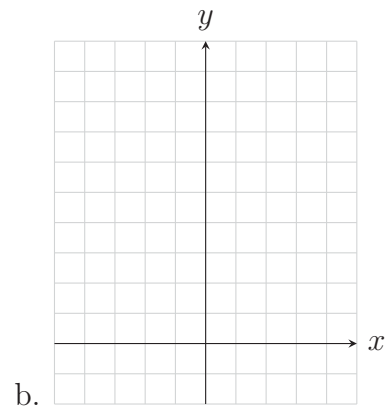
$x$	$y = g(x)$
-1	32
0	16
1	8
2	4
3	2

c.

$x$	$y = h(x)$
-1	5
0	2
1	1
2	2
3	5

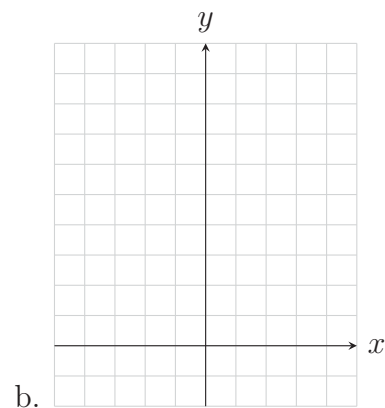
2. Graph  $exp_2(x) = 2^x$  by first making a table of values.

a.

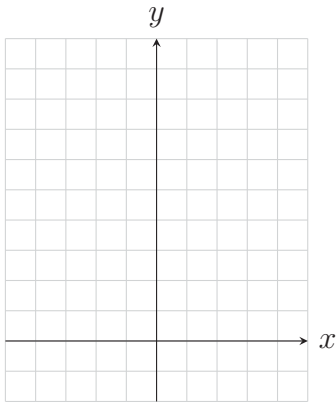
3. Graph  $exp_{1/2}(x) = \left(\frac{1}{2}\right)^x$  by first making a table of values.

a.

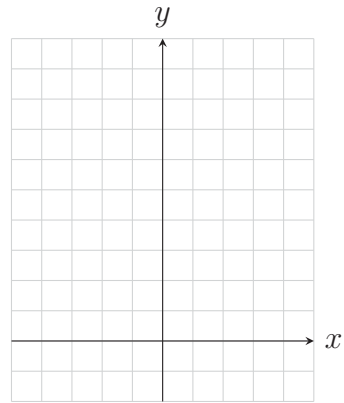



4. Graph the following functions in the coordinate planes provided.

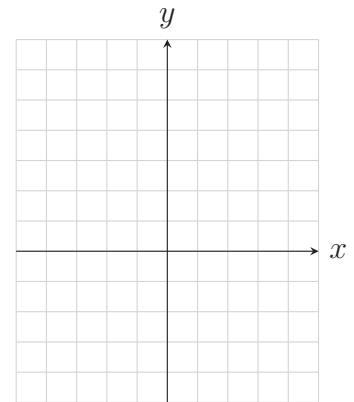
a.  $f(x) = 3^x$



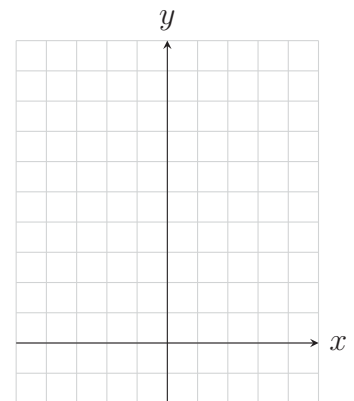
b.  $g(x) = \left(\frac{1}{4}\right)^x$



5. Graph  $f(x) = 2^{-x} - 3$  using transformations and state the domain, range, and horizontal asymptote of  $f$ .



6. Graph  $g(x) = 3\left(\frac{1}{2}\right)^{x+2}$  using transformations and state the domain, range, and horizontal asymptote of  $g$ .



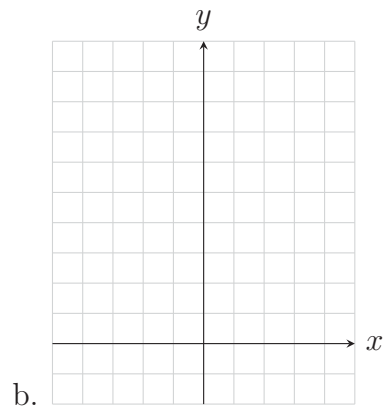
7. Solve the following exponential equations.

a.  $3^{x+1} = 81$

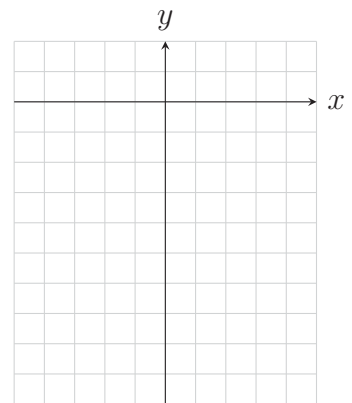
b.  $4^{2x-1} = 8^{x+3}$

8. Graph  $\exp_e(x) = e^x$  by first making a table of values.

a.

9. Graph  $g(x) = -e^{x-3}$  using transformations and state the domain, range, and horizontal asymptote of  $g$ .



10. Find an exponential function which passes through the two given points.

(a)  $(0, 50)$  and  $(3, 400)$

(d)  $(-2, \frac{125}{8})$  and  $(1, 8)$

(b)  $(0, 4)$  and  $(4, \frac{1}{4})$

(e)  $(-2, 125)$  and  $(3, \frac{1}{25})$

(c)  $(-1, \frac{2}{3})$  and  $(2, 18)$

(f)  $(-3, \frac{27}{16})$  and  $(3, \frac{4}{27})$