

Accelerated Algebra 2  
5.1 Review

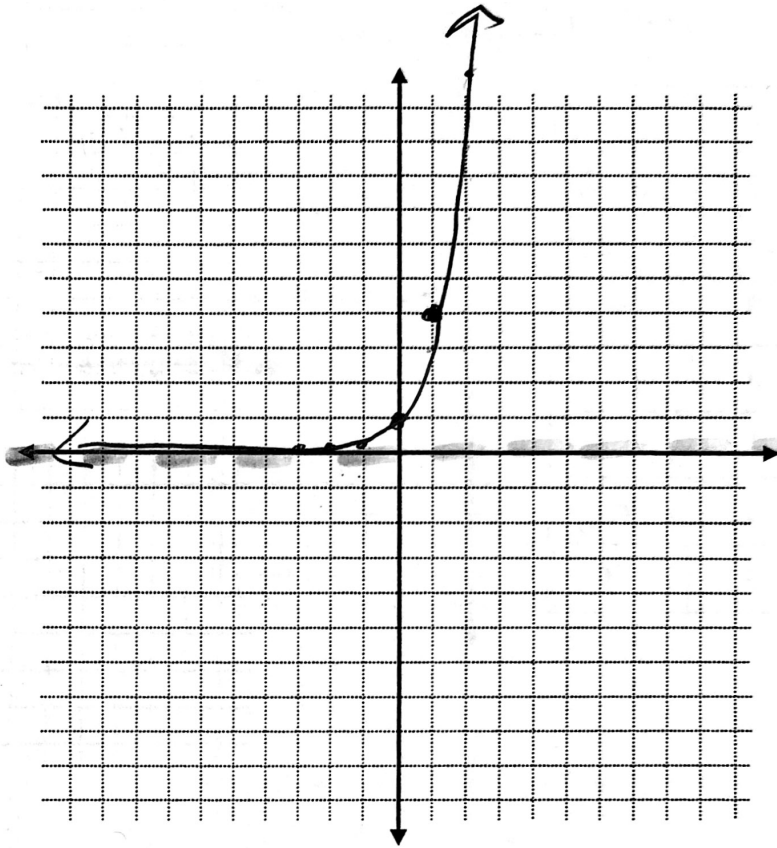
Name: Key  
Hour: \_\_\_\_\_

Exponential Functions Practice

Graph the functions

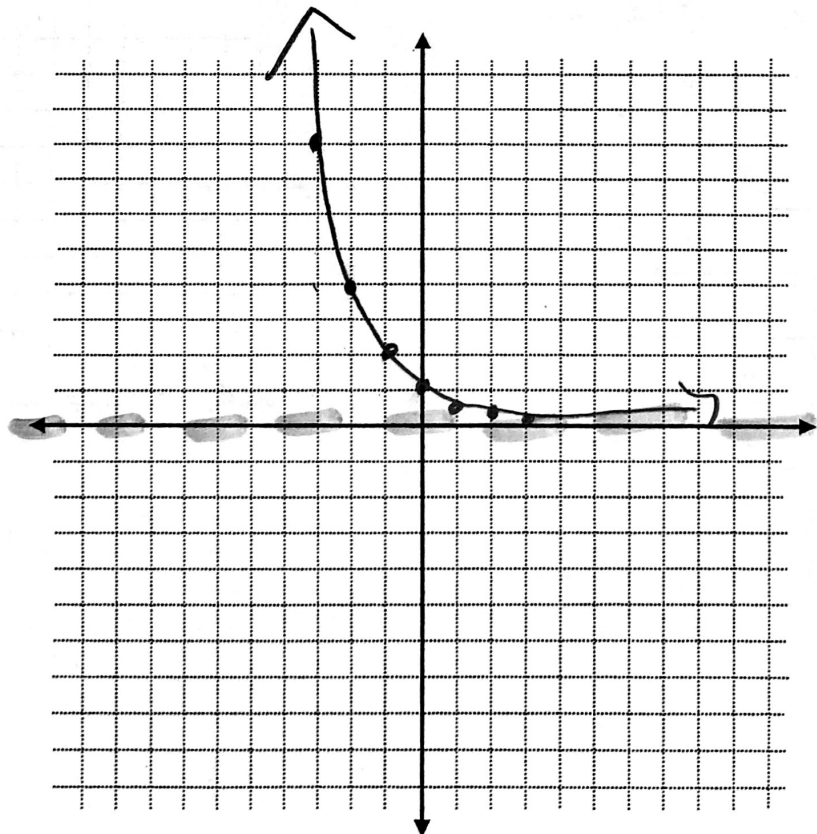
1.  $f(x) = 4^x$

x	y
-3	$1/64$
-2	$1/16$
-1	$1/4$
0	1
1	4
2	16
3	64



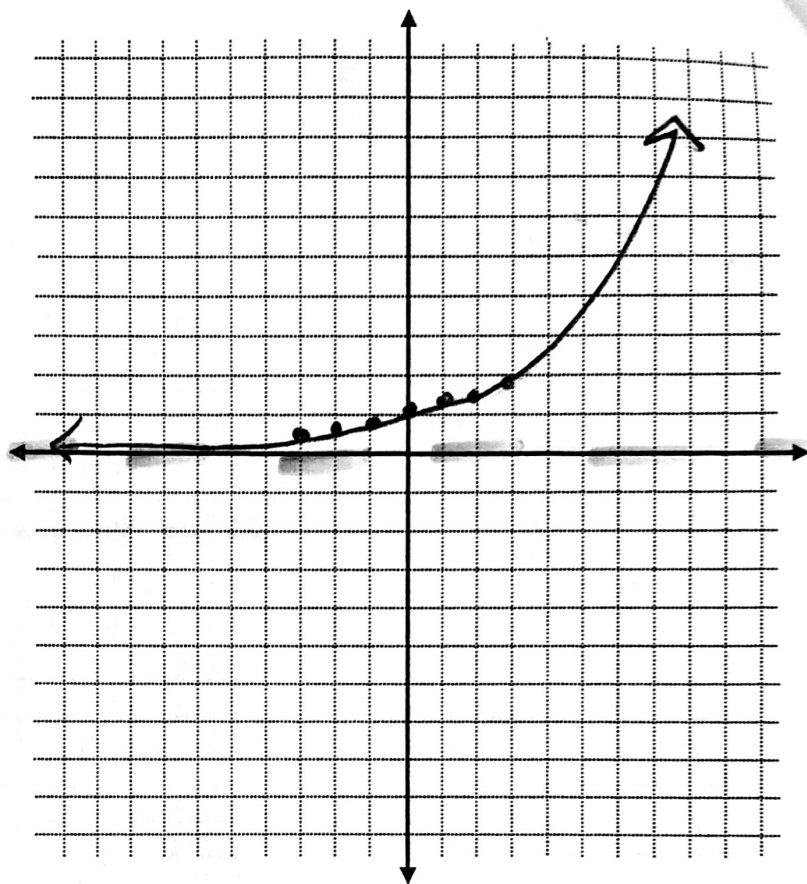
2.  $f(x) = 0.5^x$

x	y
-3	8
-2	4
-1	2
0	1
1	$1/2$
2	$1/4$
3	$1/8$



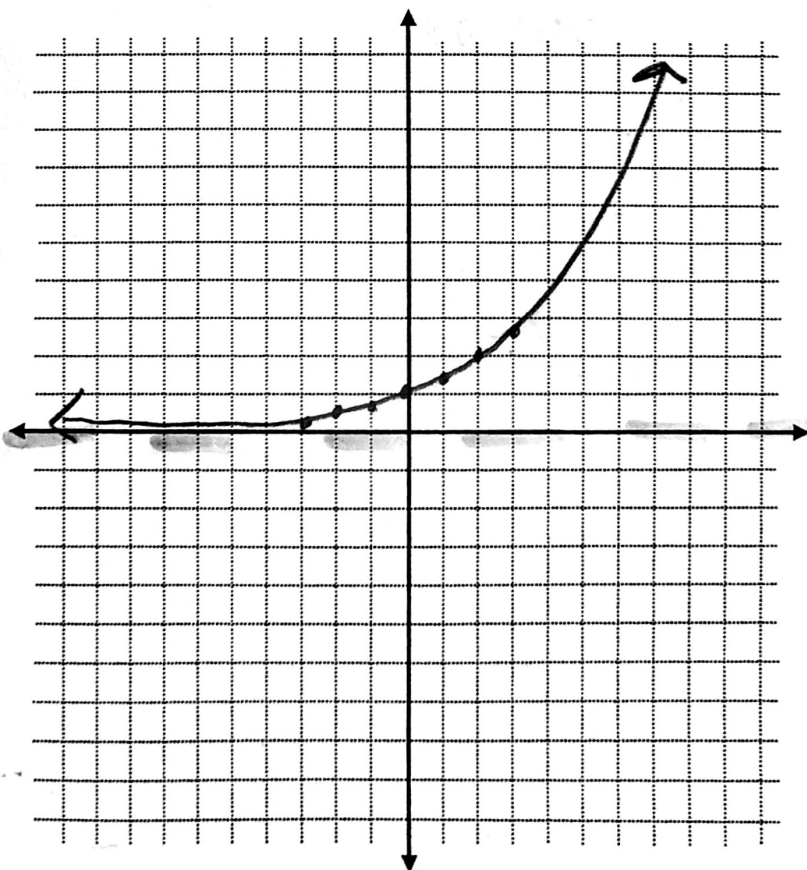
3.  $f(x) = 1.25^x$

x	y
-3	.512
-2	.64
-1	.8
0	1
1	1.25
2	1.56
3	1.95



4.  $f(x) = 2^{\frac{x}{2}}$

x	y
-3	.35
-2	.5
-1	.71
0	1
1	1.41
2	2
3	2.82

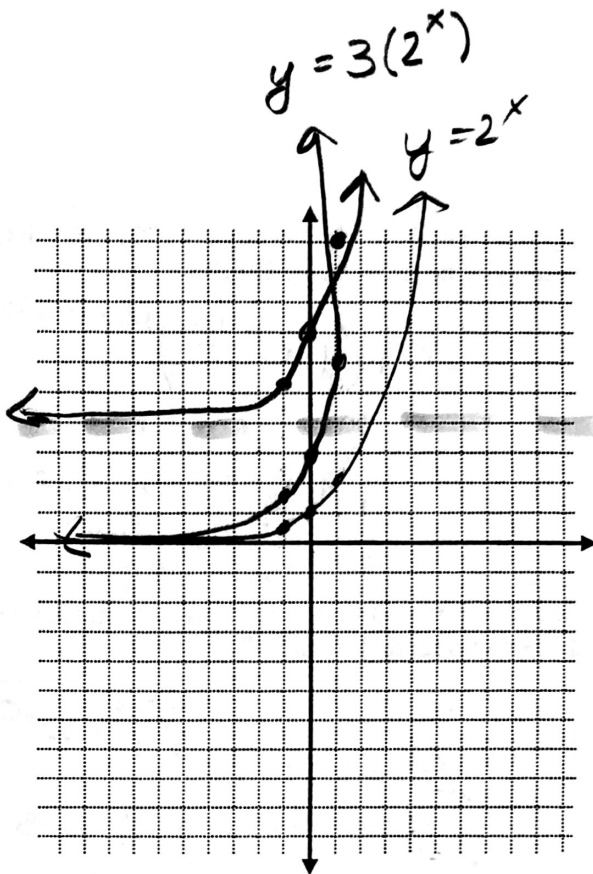


5.  $f(x) = 3 \cdot 2^x + 4$

$y = 2^x$

↑  
UP 4

x	y	$3 \cdot 2^x$
-1	1/2	3/2
0	1	3
1	2	6

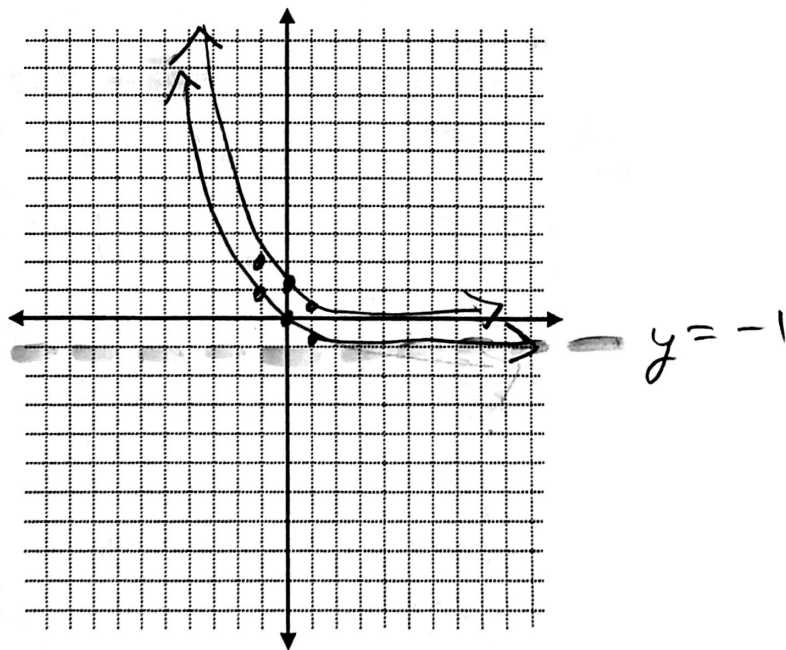


6.  $f(x) = 0.5^x - 1$

$y = 0.5^x$

↑  
↓ 1

x	y
-1	2
0	1
1	1/2



7. If you invest \$25,000 in an account that gets 12% annual interest compounded quarterly, how much would you have in 10 years?

$$A = P \left(1 + \frac{r}{n}\right)^{nt}$$

$$A = 25000 \left(1 + \frac{.12}{4}\right)^{4(10)}$$

$$= 81550.94$$

8. If you invested a penny on Jan 1, 1776 at 10% interest compounded monthly, how much would you have on Jan 1, 2011?

\$ 145,757,341.30

9. How much would you need to invest to get \$20,000 in 5 years at an annual interest rate of 8.5% compounded monthly?

\$ 13095.00

10. Solve.

a)  $2^x = 16$

$x = 4$

b)  $3^x = 27$

$x = 3$

c)  $2^x = 128$

$x = 7$

d)  $5^x = 125$

$x = 3$

e)  $4^y = 256$

$y = 4$

f)  $729 = 9^z$

$z = 3$

g)  $(-3)^x = -27$

$x = 3$

h)  $(-2)^x = -32$

$x = 5$

i)  $(-5)^x = 25$

$x = 2$

j)  $81 = (-3)^x$

$x = 4$

k)  $-2^x = -16$

$x = 4$

l)  $-4^y = -64$

$y = 3$

11. Solve.

a)  $16^{2x} = 8^{3x}$

$$x = 0$$

b)  $4^t = 8^{t+1}$

$$t = -3$$

c)  $27^{x-1} = 9^{2x}$

$$x = -3$$

d)  $25^{2-c} = 125^{2c-4}$

$$c = 2$$

e)  $16^{2p+1} = 8^{3p+1}$

$$p = 1$$

f)  $(-8)^{1-2x} = (-32)^{1-x}$

$$x = -2$$