

## Disclosures due!

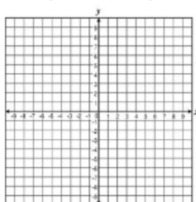
### Bell Ringer

#### Section 5.2

1. Does the table represent an exponential equation? Explain.

x	y
0	3
1	9
2	27
3	81

2. What is the graph of  $y = 7 \cdot 2^x$ ?



3. Suppose the population of a species of insects doubles every year. There are 2200 insects initially. The function  $f(x) = 2200 \cdot 2^x$  gives the number of insects after  $x$  years. How many insects will there be after 4 years?

4. Write the equation of a line using the given information. Slope:  $-\frac{1}{4}$ ; point: (12, 5)

## Solutions

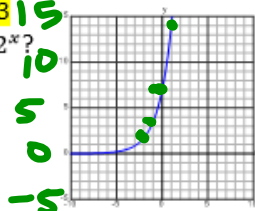
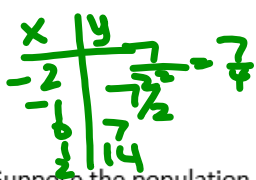
Section 5.2

1. Does the table represent an exponential equation? Explain.

x	y
0	3
1	9
2	27
3	81

yes, common ratio is 3

2. What is the graph of  $y = 7 \cdot 2^x$ ?



3. Suppose the population of a species of insects doubles every year. There are 2200 insects initially. The function  $f(x) = 2200 \cdot 2^x$  gives the number of insects after  $x$  years. How many insects will there be after 4 years?

35,200 insects

4. Write the equation of a line using the given information. Slope:  $-\frac{1}{4}$ ; point: (12, 5)

$y = -\frac{1}{4}x + 8$

$y = -\frac{1}{4}x + 8$

$5 = -\frac{1}{4}(12) + b$

$5 = -3 + b$   
 $+3 \quad +3$   
 $8 = b$

due today - correct

5.1 #s 9-14, 16-20, 25-31

😊 9.  $\frac{1}{32}$

10.  $1, m \neq 0$

😊 11.  $\frac{5s^2}{t}$

12.  $4x^3$

😊 13.  $-2$

14.  $\frac{1}{8}$

16.  $b^0$  is equal to 1, not 0;  $\frac{x^n}{a^{-n}b^0} = \frac{a^n x^n}{1} = a^n x^n$ .

17. negative

😊 18. positive

19. negative

😊 20. negative

25. a.  $5^{-2}, 5^{-1}, 5^0, 5^1, 5^2$

b.  $5^4$

c.  $a^n$

😊 26.  $ab^2$

😊 27.  $4gh^{-3}$

😊 28.  $\frac{5m^6n^{-1}}{3}$

29.  $\frac{8c^5d^{-4}e^2}{11}$

30. \$125

31.

$n$	3	$\frac{1}{6}$	7	$\frac{5}{8}$	2
$n^{-1}$	$\frac{1}{3}$	6	$\frac{1}{7}$	$\frac{8}{5}$	0.5

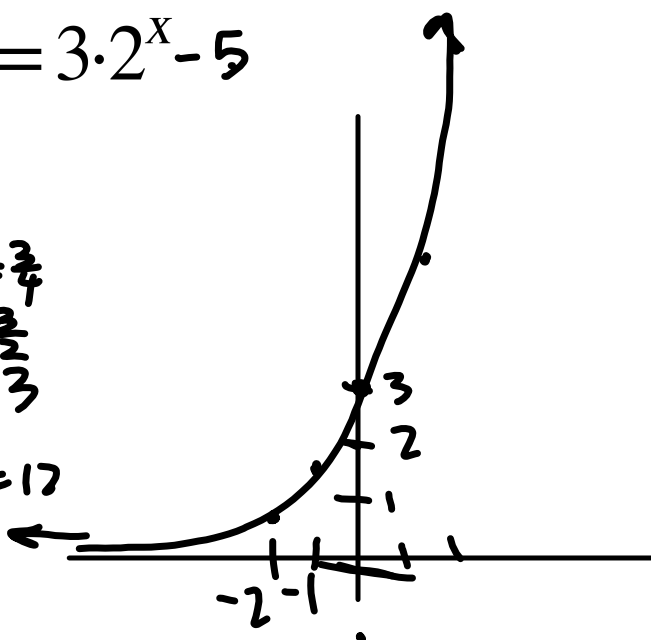
due tomorrow

5.2 #s 11-17 all, 18-24 evens, 35-38 all

Graph

$$y = 3 \cdot 2^x - 5$$

x	y
-2	$3 \cdot 2^{-2} = \frac{3}{2^2} = \frac{3}{4}$
-1	$3 \cdot 2^{-1} = \frac{3}{2} = \frac{3}{2}$
0	$3 \cdot 2^0 = 3 \cdot 1 = 3$
1	$3 \cdot 2^1 = 6$
2	$3 \cdot 2^2 = 3 \cdot 4 = 12$

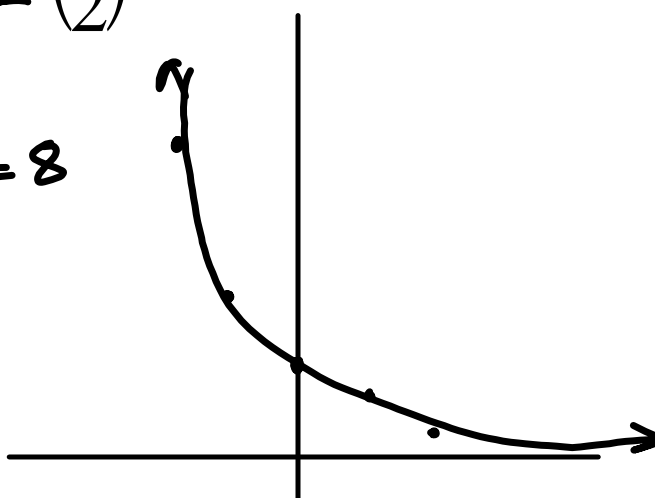


Graph

$$y = \underline{2} \cdot \left(\frac{1}{2}\right)^x$$

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

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

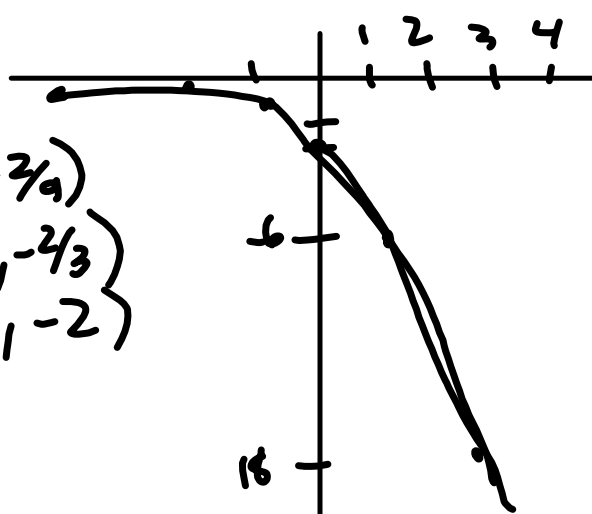


Graph

$$y = \underline{-2} \cdot (\underline{3})^x$$

x	y
-2	$-\frac{2}{9}$
-1	$-\frac{2}{3}$
0	-2
1	-6
2	-18

$\rightarrow (-2, -\frac{2}{9})$   
 $\rightarrow (-1, -\frac{2}{3})$   
 $\rightarrow (0, -2)$

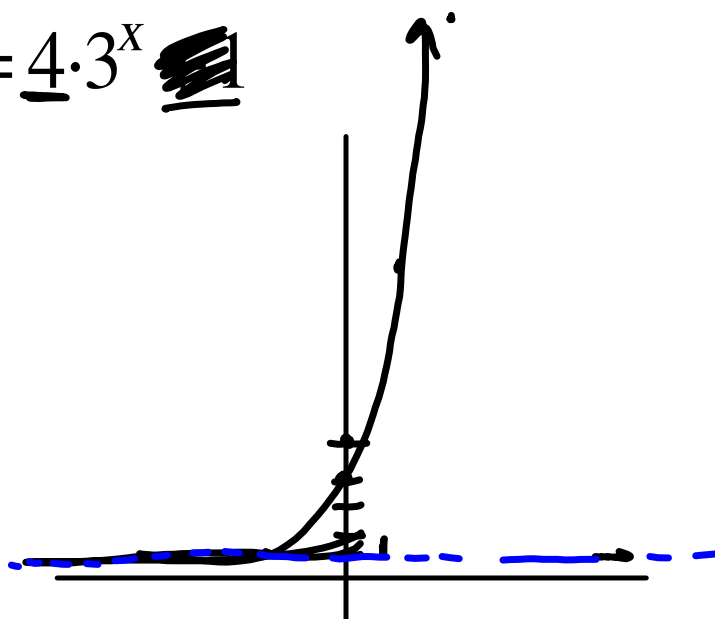




Graph

$$y = \underline{4} \cdot \underline{3^x}$$

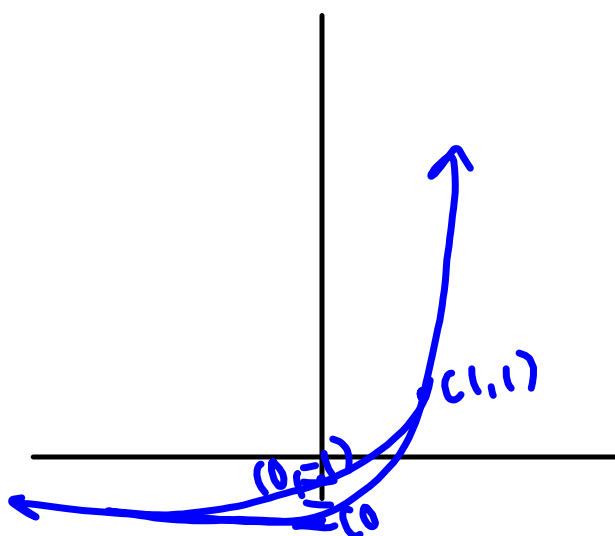
x	y
-2	$\frac{13}{9}$ 1.4
-1	$\frac{7}{3}$ 2.3
0	5
1	13
2	37



Graph

$$y = 2 \cdot 2^x - 3$$

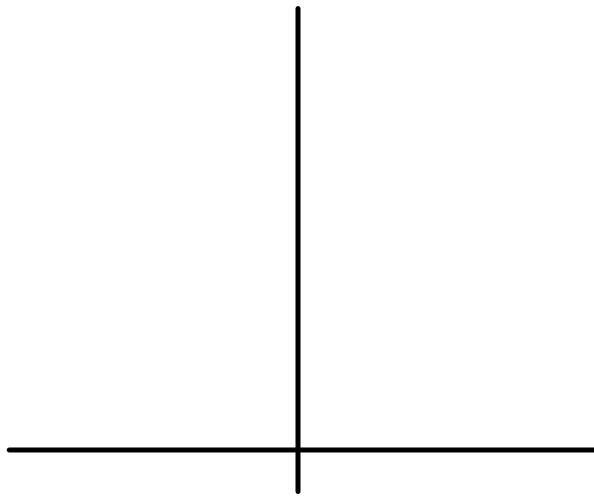
x	y
-2	-2.5
-1	-2
0	-1
1	1
2	5



Graph

$$y = 3^x + 3$$

x	y
-2	
-1	
0	
1	
2	

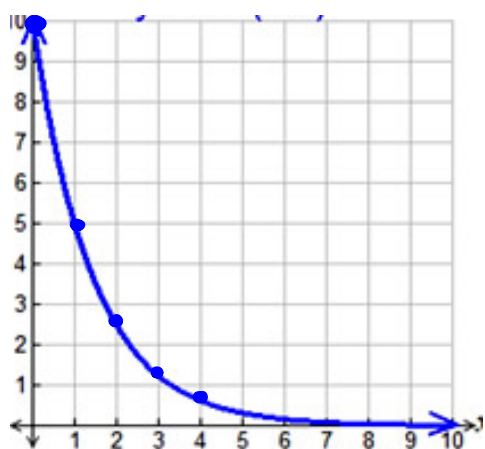


Write the equation of the function shown



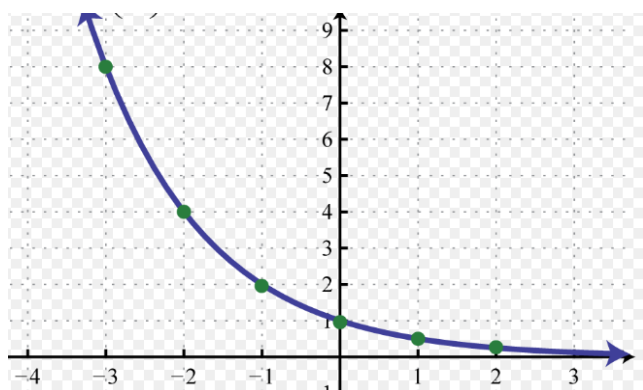
$$y = 1 \cdot 2^x \quad y = 2^x$$

Write the equation of the function shown



$$y = 10 \left(\frac{1}{2}\right)^x$$

Write the equation of the function shown



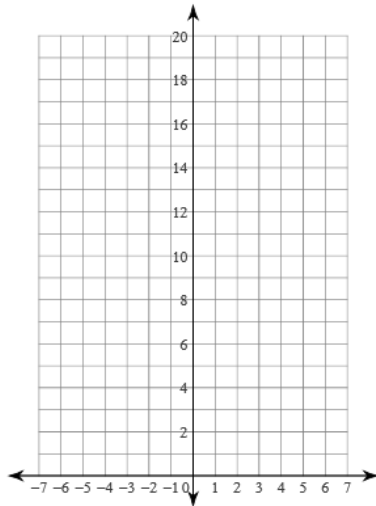
CCS1 Unit 2a **due Thursday** Name \_\_\_\_\_ ID: 1

Graphing Exponential Functions using a table Date \_\_\_\_\_ Period \_\_\_\_\_

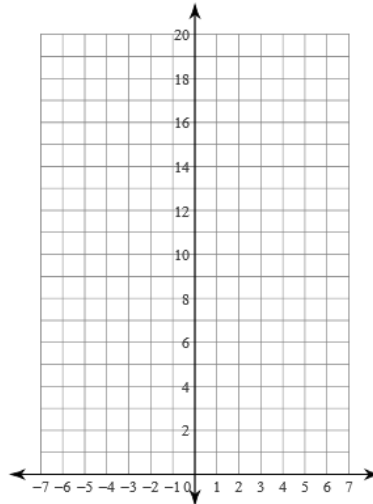
Sketch the graph of each function.

**SKIP # 2, 7, 12**

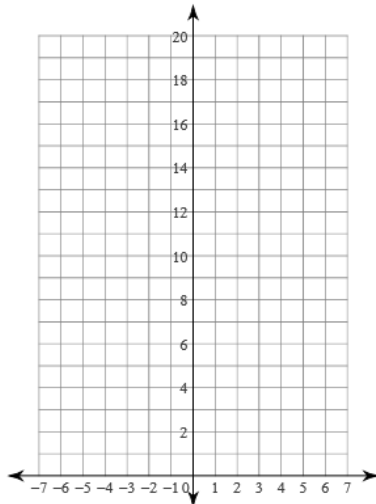
1)  $y = 4 \cdot \left(\frac{1}{2}\right)^x$



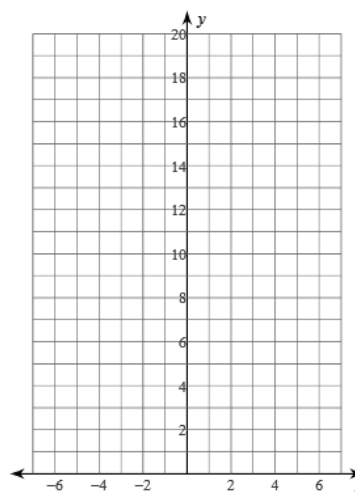
2)  $y = 5 \cdot 2^x$



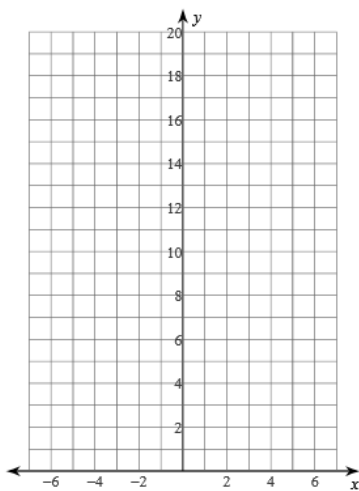
3)  $y = 2 \cdot 3^x$



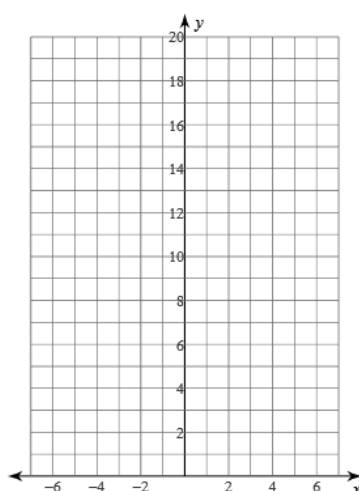
4)  $y = 3 \cdot \left(\frac{1}{2}\right)^x$



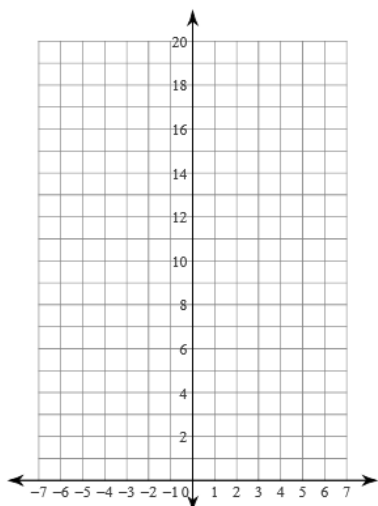
5)  $y = \frac{1}{2} \cdot 3^x$



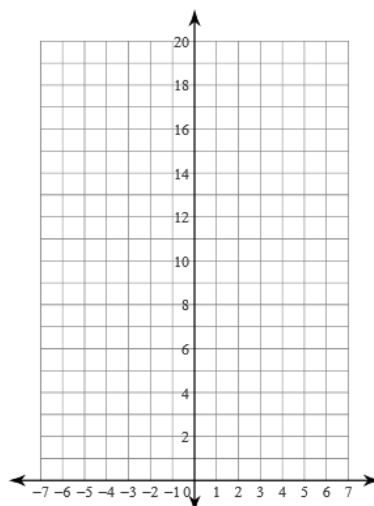
6)  $y = 5 \cdot \left(\frac{1}{2}\right)^x$



7)  $y = 3 \cdot 2^x + 1$

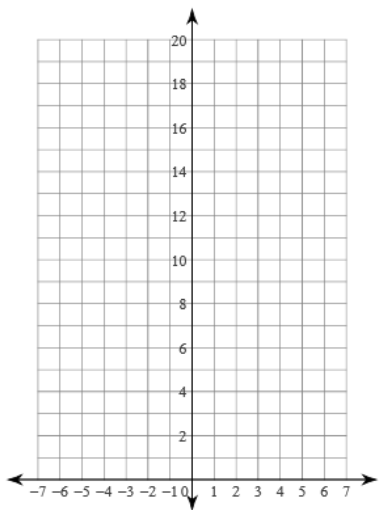


8)  $y = 4 \cdot 2^x + 1$

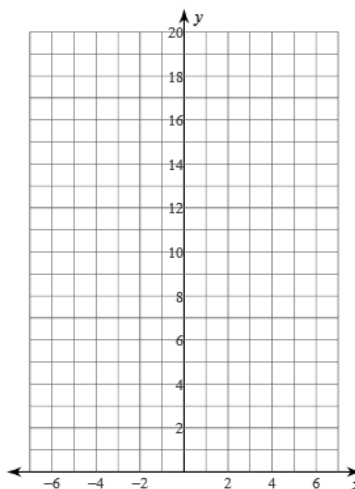




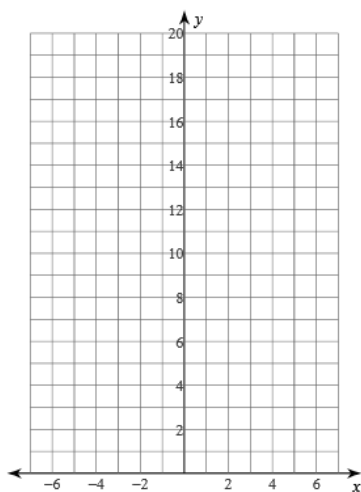
9)  $y = 4 \cdot \left(\frac{1}{2}\right)^x + 2$



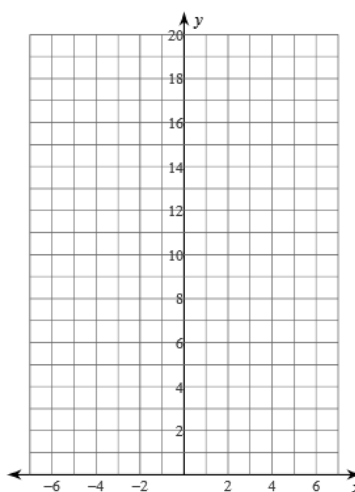
10)  $f(x) = 5 \cdot 2^x + 1$



11)  $f(x) = 4 \cdot 2^x + 2$

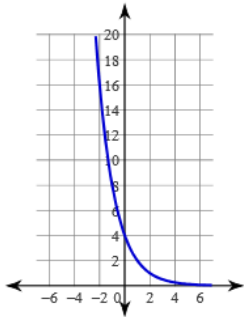


12)  $f(x) = 5 \cdot \left(\frac{1}{2}\right)^x + 2$

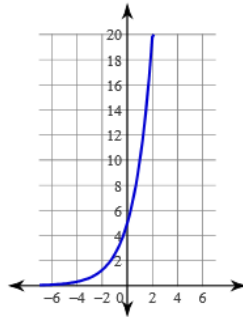


Answers to Graphing Exponential Functions using a table (ID: 1)

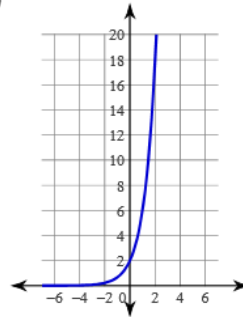
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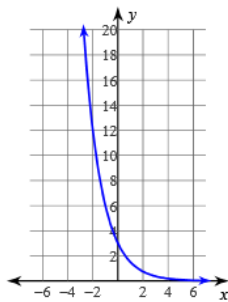
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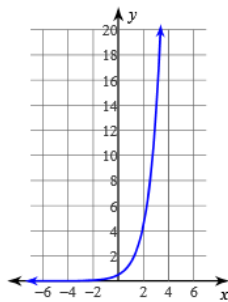
3)



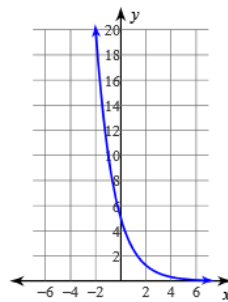
4)



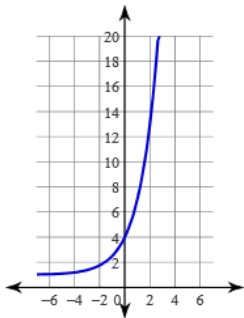
5)



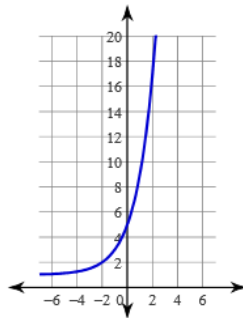
6)



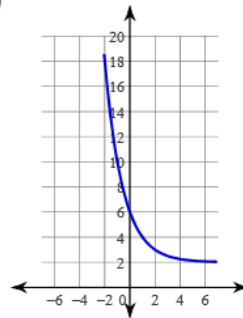
7)



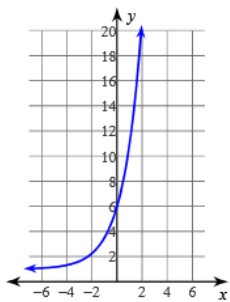
8)



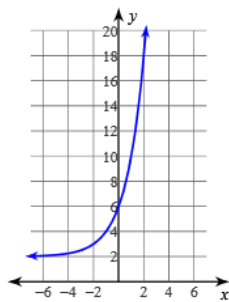
9)



10)



11)



12)

