## Homework

(Ex: 1) Evaluate each function rule for the given value. (8-7)

1. 
$$f(x) = 6^x \text{ for } x = 3$$

2. 
$$g(t) = 2 \cdot 3^t$$
 for  $t = -2$ 

3. 
$$y = 20 \left(\frac{1}{2}\right)^x$$
 for  $x = 3$ 

4. 
$$h(w) = 0.5 \cdot 4^w$$
 for  $w = 3$ 

(EX:2) Fill in the table for the following situations.

- 5. Suppose an investment of \$10,000 doubles in value every 13 years. How much is the investment worth after 52 years? After 65 years?
- years Investment value

  0 \$10,000

  13 26 39 52

6. Suppose an investment of \$500 doubles in value every 15 years. How much is the investment worth after 30 years? After 45 years?

Years	Investment value
15	
30	
<i>30</i> 45	
60	
75	

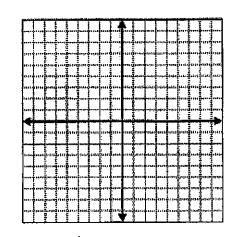
7. Suppose an investment of \$2,000 triples in value every 8 years. How much is the investment worth after 24 years? After 32 years?

## (EX:3) Graph each function. (8-11)

65

8.

	<u> </u>	.—	
x	$y=10\cdot 2^x$	y	(x,y)
-2	$y=10\cdot 2^{-2}=$		
-1	$y=10\cdot 2^{-1}=$		
0	$y = 10 \cdot 2^0 =$		
1	$y=10\cdot 2^1=$		
2	$y = 10 \cdot 2^2 =$		



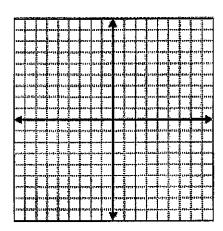
9.

,				
	x	$y = 0.1 \cdot 2^x$	у	(x,y)
	-2			
	-1			
	0			
	1			
	2			

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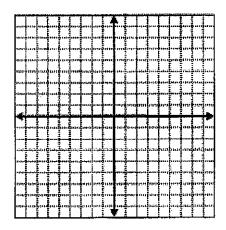
10.

x	$y = \left(\frac{1}{4}\right)^x$	y	(x,y)
-2			
-1			
0		-	
1			
2			



11.

x	$y = \frac{1}{4} \left( \frac{1}{2} \right)^{x}$	У	(x,y)
-2			
-1			
0		,	
1			
2			



Ex: 4 Graph each function.

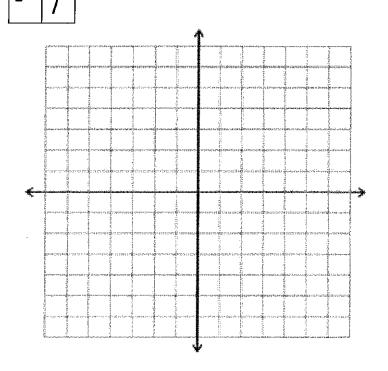
×	У
-2	16
-1	1/8
0	14
1	12
2	1

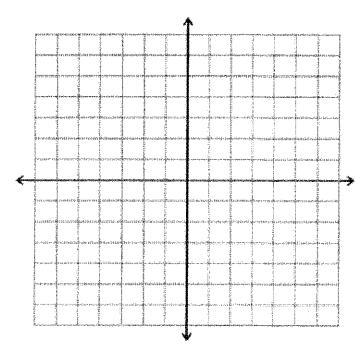
12. 
$$y = \frac{1}{4}(2)^x$$

- A. growth/decay? \_\_\_\_\_
- B. asymptote \_\_\_\_\_
- C. domain \_\_\_\_\_
- D. range

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- B. asymptote \_\_\_\_\_
- C. domain \_\_\_\_\_
- D. range \_\_\_\_\_

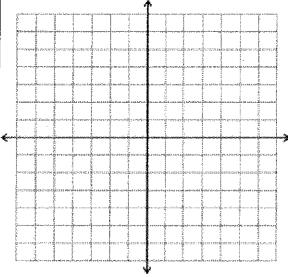
×	У
-2	19
-1	13
0	1
1	3
2	9



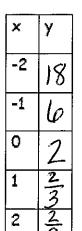


14. 
$$y = -2(2)^{x}$$

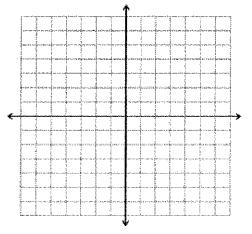
- A. growth/decay? \_\_\_\_\_
- B. asymptote \_\_\_\_\_
- C. domain \_\_\_\_
- D. range \_\_\_\_\_



16. 
$$y = 2(\frac{1}{3})^x$$

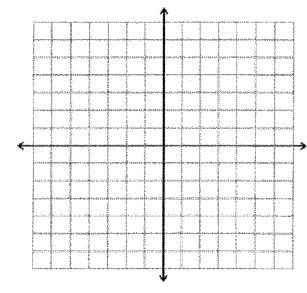


- A. growth/decay? \_\_\_\_\_
- B. asymptote \_\_\_\_\_
- C. domain \_\_\_\_\_
- D. range \_\_\_\_\_



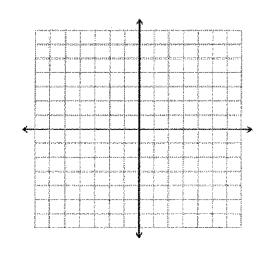
15. 
$$Y = -3(\frac{1}{2})^{x}$$

- A. growth/decay? \_\_\_\_\_
- B. asymptote \_\_\_\_\_
- C. domain \_\_\_\_\_
- D. range \_\_\_\_\_



17. 
$$Y = 2^x$$
  $y = \frac{1}{2}^x$ 

intersection \_\_\_\_\_



×	у
-2	-12
-1	-6
0	-3
4	32
2	- <u>3</u>

γ=	2^
×	У
-2	上4
-1	1
0	1
1	2
2	4
(= 支)	 ⁄

<b>y</b> =	<u>支x</u>
×	У
-2	
-1	<u>-1</u> 2
0	0
1	ち
2	

doubles every 8 years.		- College							***	
A. write an exponential	function:				***************************************					***************************************
										~~~~
B. graph this trend over	the next									~~~~
40 years										***********
C. domain										
	•									*********
range		-								
	y (x,y)									
8										
16						***************************************				
24 32										
32										
40 19. A car depreciates in model of y = 40000(0.91Which statement	)×	ear. Abr	and nev	v Explo	rer h	as a c	depre	eciat	tion	
19. A car depreciates in model of y = 40000(0.91  Which statement  A. The car deprecia	)× is FALSE?	ear. A br	and nev	v Explo	rer h	as a c	depre	eciat	rion	e e e e e e e e e e e e e e e e e e e
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