SRHS Math 1 – Chapter 6 REVIEW

1. Determine whether each of the following represents a relationship that is linear, exponential growth, exponential decay or none of these.

   a. $y = 4 \cdot 7^x$

   b. $y = 2x - 3$

   c.

x	0	1	2	3
y	7	3	-1	-5

   d.

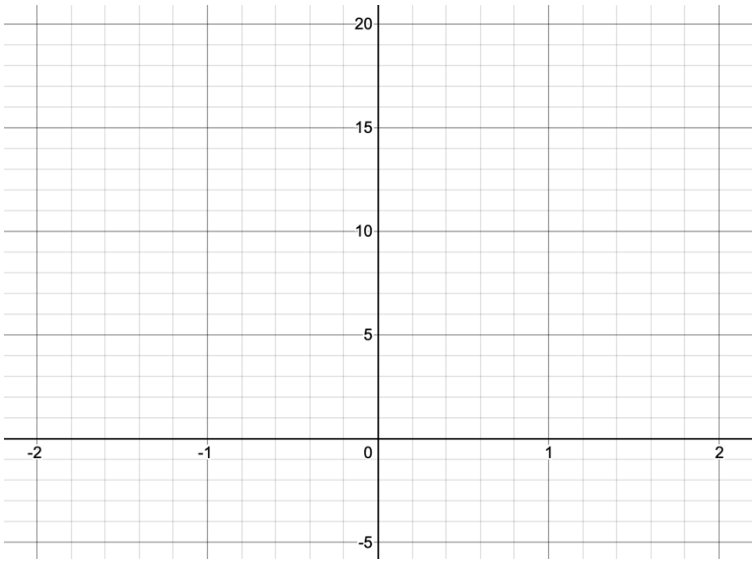
x	-2	-1	0	1
y	60	30	15	7.5

   e.

x	0	1	2	3
y	0	1	4	9

2. Complete the table and graph the function: $y = 2 \cdot 3^x$

x	y
-2	
-1	
0	
1	
2	



3. Write an exponential function that represents the situation: "At the start of a wildlife survey, the population of wolverines in Annadel State Park was 237 but increased by 3% each year."

4. Solve each equation.

   a. $3^{9x} = 3^{7x+8}$

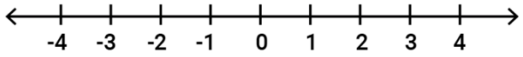
   b. $7^{x-5} = 49^{x}$

5. Write an exponential function for the data:

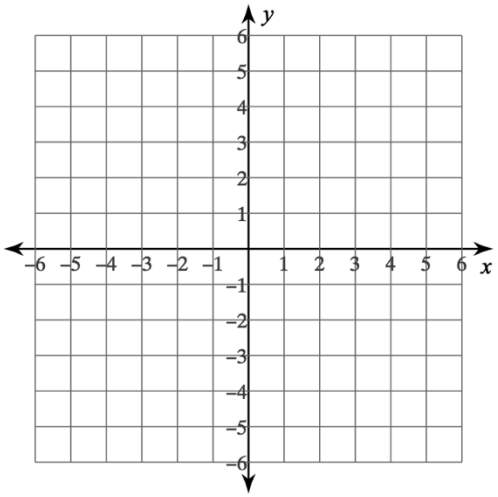
x	-1	0	1	2	3
y	1.2	6	30	150	750

6. Solve the equation: $3x + 2 = 17$

7. Graph the solution to: $-2x < 6$



8. Graph the equation: $y = \frac{2}{3}x - 1$



9. Write the equation of the line through the points: $(2, 5)$ and $(5, 11)$

10. Solve the system of equations: $5x + y = 14$

    $y = 2x - 7$

Solve each equation

11. $\frac{x}{10} = 3$

11)_____

12. $2x + 3(2 - x) = 8$

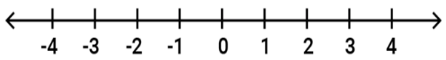
12)_____

13. $|f|$= 25

13)_____

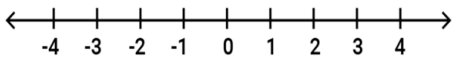
14. Graph the compound inequality:
$-7 \leq 5x - 2 < 3$

14)



15. Graph:
$|x| > 2$

15)



16. Evaluate the function:
$f(x) = 3x - 15\ for\ x = 9$

16)_____

17. Find the intercepts:
$2x - 10y = 20$

17) x-int:_____

y-int:_____

18. Find the slope of the line through the points:
(5, 8) and (9, 3).

18)_____

19. Write an equation of the line that passes through the point (5, -3) and has the given slope: $m = 4$

19)_____

20. Sketch a scatterplot that shows a strong, negative correlation.