MasterMath

Name _____

6th Grade Quarter 4 Exam

Date _____

Closed Book; 60 minutes to complete

CUCC; You may use a calculator.

1. **Solve this inequality:** $3x + 12 > 15$

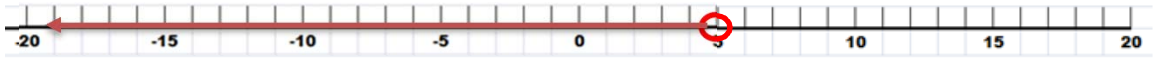
   x > 1

2. **Solve this inequality:** $6 - 5x + 2x \leq 24$

   x ≥ 10

3. **Solve this inequality, and then graph your solution:** $5x < 15$

   x < 5



4. **Write an Inequality to describe this sentence, and then solve the Inequality: 125 is no less than 5 times a number z**

   125 ≥ 5z

   25 ≥ z

5. **Create an Input-Output Table for this function. Use -3, -2, -1, 0, 1, 2, 3 as your domain.**

   y = 4x - 20

x	y
-3	-32
-2	-28
-1	-24
0	-20
1	-16
2	-12
3	-8

6. **Write an equation for the function shown by the table.**

x	y
-1	-7
0	-6
1	-5
2	-4
3	-3

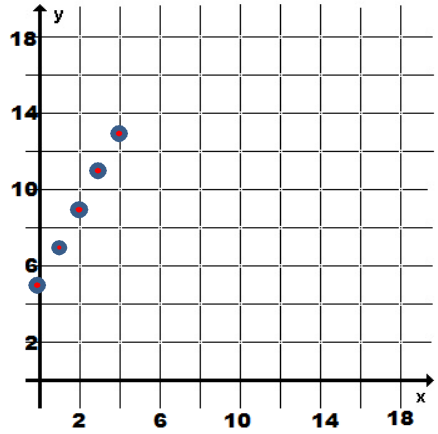
y = x - 6

7. **The output minus 3 is equal to half the input. Write a function to describe this relationship; then create an Input-Output Table to represent the relationship for a domain of -2, -1, 0, 1, and 2.**

x	y	y = 3 + .5x
-2	2.0	
-1	2.5	
0	3.0	
1	3.5	
2	4.0	

8. **Graph this data. Does the graph represent a linear function? Write an equation for the function.**

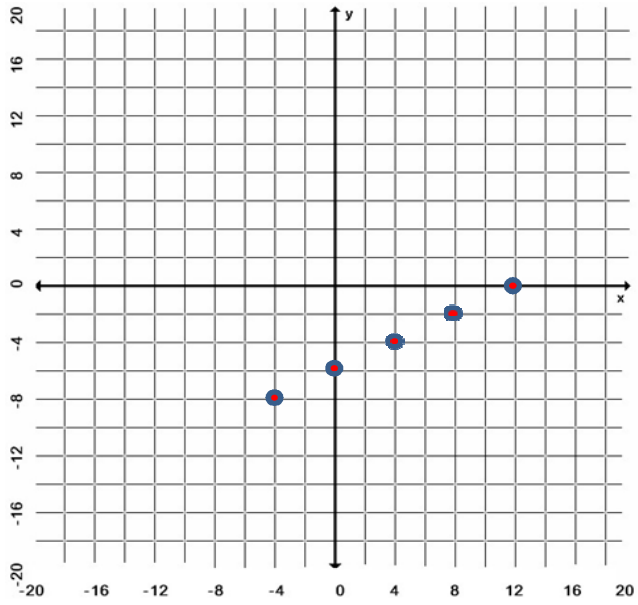
x	y
0	5
1	7
2	9
3	11
4	13



linear?	equation?
yes	y = 2x + 5

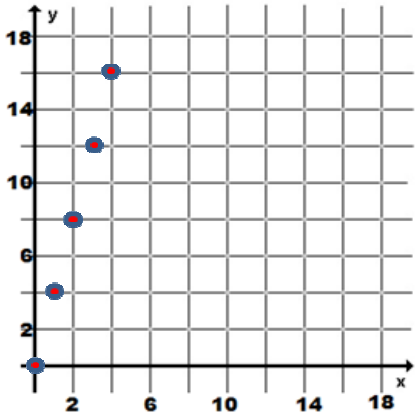
9. **Graph this function: y = 1/2 x - 6**

x	y
-4	-8.0
0	-6.0
4	-4.0
8	-2.0
12	0.0



10. **The formula for the perimeter of a square is four times the length of a side. Create a table, a graph, and an equation for this relationship.**

x	y
0	0
1	4
2	8
3	12
4	16



equation?
y = 4x

11. **Write this equation in function form: 3x + y = 16**

f(x) = -3x + 16

12. **Find the solution set for this function if x = 3: y = 2x - 5**

1

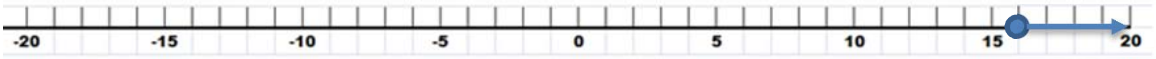
13. **Write a function that describes this situation: The imput plus three equals half the output.**

f(x) = 2x + 6

14. **Create an inequality to accurately describe these situation, and draw it on the number line:**

"You need to be at least 16 years old to get a driving learner's permit in most states."

x ≥ 16



15. **Solve this Inequality: 1.8 + x < 2.6 - 5.5**

x < -4.7

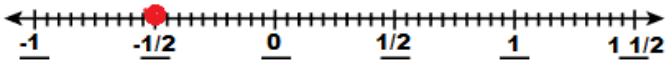
16. **Solve this Inequality: 3/4x + 1/2 > 1**

x > 2/3

17. **Solve this Inequality: x - 16 < 18 - 12**

x < 22

18. **What is the Absolute Value of the number represented on this number line?**



1/2

19. **What Quadrant is this point in: (-3, 4)**

2

20. **If Point 1 is in Quadrant 3, and Point 2 is in Quadrant 4, which point has an x with the higher value?**

Point 2