MasterMath

Name _____

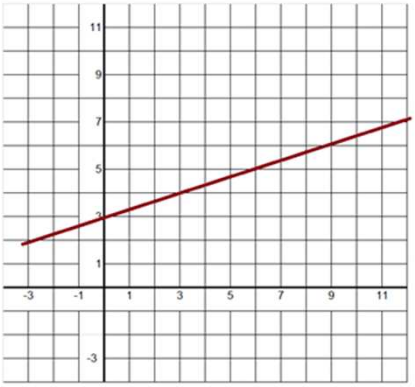
8th Grade Quarter 2 Exam Date _____

Closed Book; 60 minutes to complete; show units; show work.

CUCC

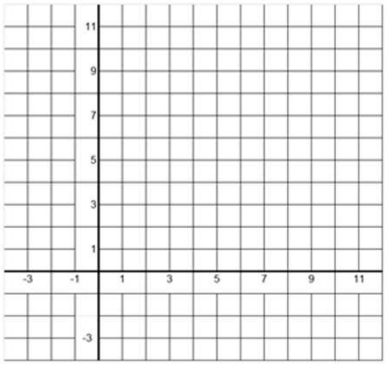
1. **The slope of a straight line is 2. The y intercept of the line is 12. What is the equation that the line represents?**

2. **What equation in slope-intercept form does this line represent?**

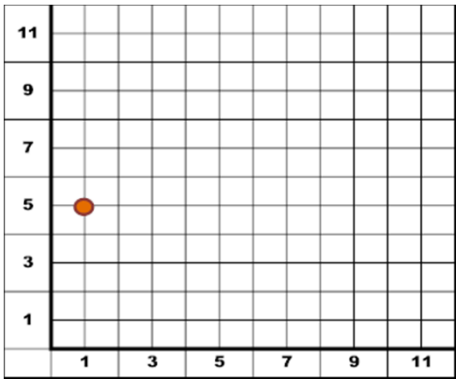


3. **These two points are on a straight line: (0, 6), (3, 12). What equation is represented by the straight line?**

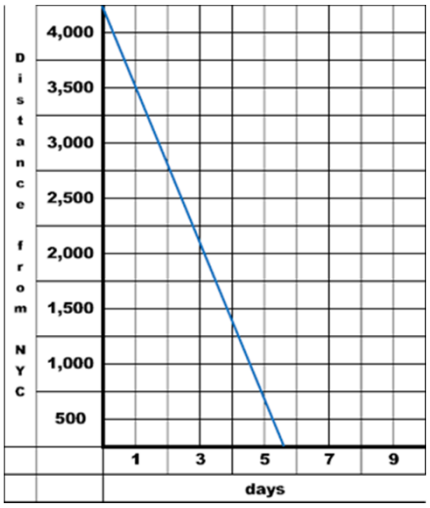
4. **Draw a line that represents this equation: y = 3 + 2x**



5. **Write an equation for a line with a slope of 5 that goes through this point.**



6. **A cruise ship leaves Stockholm heading for New York City. This graph shows the distance from NYC after each day. Interpret the y Intercept and the x Intercept**



x intercept	
y intercept	

7. **Solve these system of linear equations:**

		Solution	
Equation 1	**Equation 2**	**x**	**y**
y = 5x + 4	**y = 2x + 3**		
y = x - 6	**y = 4 - 2x**		
y = -4x - 12	**y = .75x + 11.75**		

8. **A burger and a smoothie costs $5. You and your friends buy 3 burgers and 6 smoothies, and the bill comes to $21, How much does a burger cost? How much does a smoothie cost?**

burger	smoothie

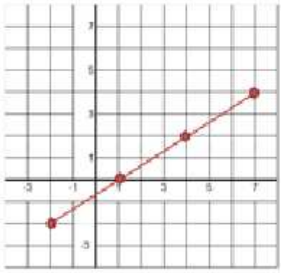
9. **Please convert the equation to a Function**

Equation	Function
2x + 3y = 63	
y - 5x = 17	

10. **You have $40 to spend on your evening with a friend at the Carnival. You want to buy some ride tickets (y) and also some food tickets (x). The ride tickets are $4 each. The food tickets are $6 each. What is the domain and the range of the tickets you could purchase?**

Domain	Range

11. **Find the Domain and the Range of the function represented in this graph.**



Domain	Range

12. **Find the Domain and Range of the the function represented by this table.**

hats (x)	4	3	2	1
belts (y)	10	8	6	4

Domain	Range

13. **Big State University studied the idea that the gas mileage (m) of a vehicle decrease as the number of wheels (w) on the vehicle decreased. They came up with a function that they felt described the relationship: m = 96.75 ö w. Is there a discrete or a continuous domain?**

14. **The equation f = 0.305m can be used to convert meters into feet. Is the Domain of this function Discrete or Continuous?**

15.

Your teacher says that your tomatoe plant will grow 1.25" taller each month. It is now 6' tall. Write a formula that will tell you how tall your plant is at any time in the future. Is there a continuous or a discrete domain?

formula	
Discrete or Continuous?	

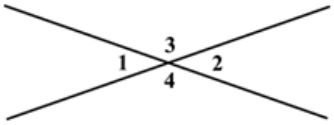
16. Are these functions linear or non-linear

Function	Re-written	Linear or Non-Linear	
x + y = 6			
3y = 9x - 12			
xy = 16			

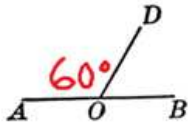
17. Does this table represent a linear function?

x	y
0	6
1	8
2	10
3	12
4	14
5	16

18. Angle 2 is 28°. How big is Angle 3?

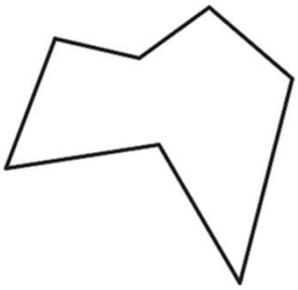


19. How many degrees are in Angle DOB?



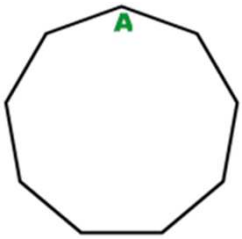
20. The triangle has 2 obtuse angles and an acute angle. Is this possible? Explain.

21. **What is the Sum of the Angles of this polygon?**

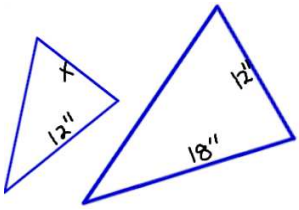


22. **This is the flag of South Africa. What is the sum of the angles of the green polygon on the flag?**

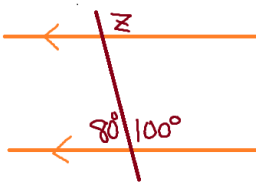
23. **This is a regular polygon. How many degrees are in angle A?**



24. **These are similar triangles. Find x.**

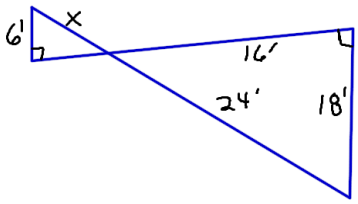


25. **Find Angle z.**



26. **Triangle A and B are similar. Two of Triangle A's angles are 42° and 67°. Two of Triangle B's angles are 67° and 71°. How many degrees are in the third angle of Triangle B?**

27. Find x



Results							
%	?'s	# of ?'s	Wrong	Concept			
	1-4	4		821 Writing Equations in Slope-Intercept Form			
	5-6	3		822 - Writing Equations using a Point and a Slope			
	7-8	8		823 Writing Systems of Linear Equations			
	9-12	8		824 Domain and Range of a Function			
	13-15	4		825 Discrete and Continuous Domains			
	16-17	7		826 Comparing Linear and Nonlinear Functions			
	18-20	3		827 Classifying Angles and Sides of Triangle			
	21-23	3		828 Angles of Polygons			
	24-27	4		829 Parallel Lines, Transversals & Similar Triangles			
		44		Total			