MasterMath

Name _____

8th Grade Quarter 2 Exam

Date _____

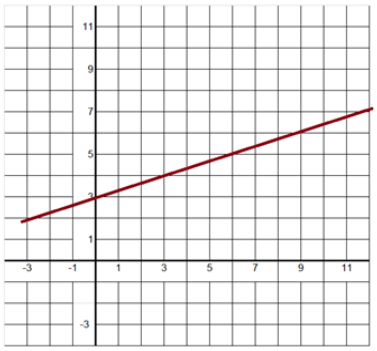
Closed Book; 60 minutes to complete; show units; show work.

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? 821

y = 2x + 12

2. What equation in slope-intercept form does this line represent? 821

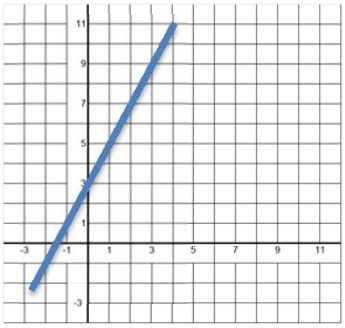


y = .333x + 3

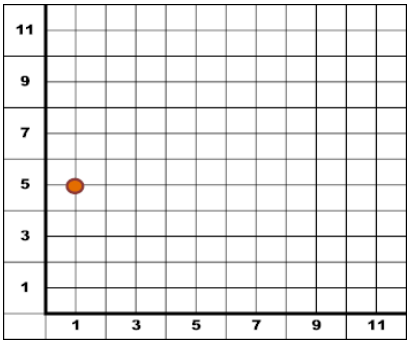
3. These two points are on a straight line: (0, 6), (3, 12). What equation is represented 821

y = 2x + 6

4. Draw a line that represents this equation: y = 3 + 2x 821

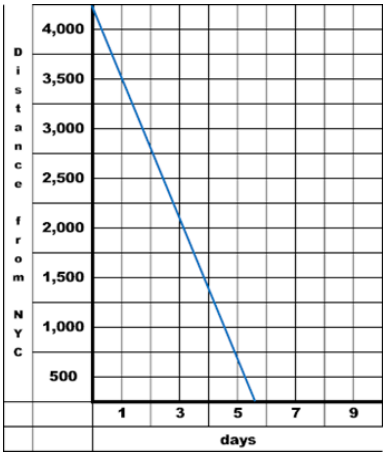


822 5. Write an equation for a line with a slope of 5 that goes through this point.



y = 5x

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



x intercept	trip length in days
y intercept	distance to NYC from Stockholm

823 7. Solve these system of linear equations:

		Solution	
Equation 1	Equation 2	x	y
y = 5x + 4	y = 2x + 3	- 1/3	2 1/3
y = x - 6	y = 4 - 2x	3 1/3	-2 2/3
y = -4x - 12	y = .75x + 11.75	-5	8

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
823 does a smoothie cost?

burger	smoothie
$3	$2

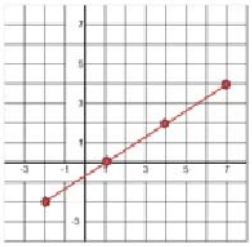
824 9. Please convert the equation to a Function

Equation	Function
2x + 3y = 63	y = -2/3x + 21
y - 5x = 17	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
824 you could purchase?

Domain	Range
{0, 1, 2, 3, 4, 5, 6}	{0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10}

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



Domain	Range
{-2, -1, 0, 1, 2, 3, 4, 5, 6, 7}	{-2, -1, 0, 1, 2, 3, 4}

824 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
{1, 2, 3, 4}	{4, 6, 8, 10}

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 ÷ w. Is there a
825 discrete or a continuous domain?

discrete

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

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
825 future. Is there a continuous or a discrete domain?

formula	y = 1.25x + 6
Discrete or Continuous?	continuous

826 16. Are these functions linear or non-linear

Function	Re-written	Linear or Non-Linear
x + y = 6	y = 6 - x	Linear
3y = 9x - 12	y = 3x - 4	linear
xy = 16	y = 16/x	non-linear

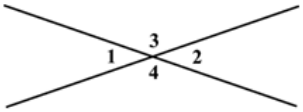
826 17. Does this table represent a linear function?

linear

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

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

152°



827 19. How many degrees are in Angle DOB?

120°

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

No. A triangle has a total of 180°. An obtuse angle is an angle greater than 90°. 2 obtuse angles would exceed 180°.

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

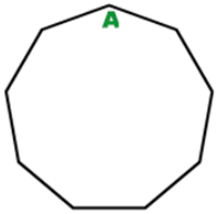
900°

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

1620°

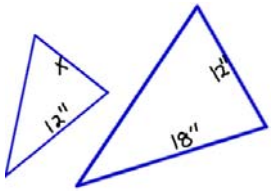
828 23. This is a regular polygon. How many degrees are in angle A?

140°



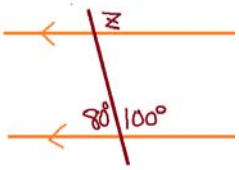
829 24. These are similar triangles. Find x.

18"



829 25. Find Angle z.

100°



829 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

42°

829 27. Find x

8'