MasterMath

8th Grade Quarter 1 Exam

Name _____

Date _____

Closed Book; 60 minutes to complete; show units in answers; show work for partial credit.

CUCC

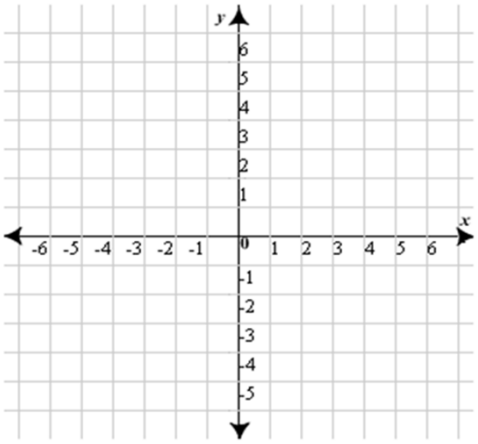
1.

Equation 1	Equation 2	Find an ordered pair that solves this pair of equations
x + y = 12	y = x + 2	
2x + 5y = 20	y = x + 3	

2. **You have 8 coins, and all are either nickles or pennies. You have a total of 16 cents. How many of each coin do you have?**

nickles	pennies

3. **Graph these two equations to solve for x: y = x + 6; y = -x + 2**



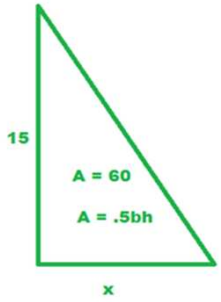
4. **Carlos spent $3.60 for stamps to mail packages. Some were 30¢ stamps and the rest were 20¢ stamps. The number of 20¢ stamps was 2 less than the number of 30¢ stamps. How many stamps of each kind did Carlos buy?**

.20	.30

5. **A test has twenty questions worth 100 points. The test consists of True/False questions worth 3 points each and multiple choice questions worth 11 points each. How many true - false questions are on the test?**

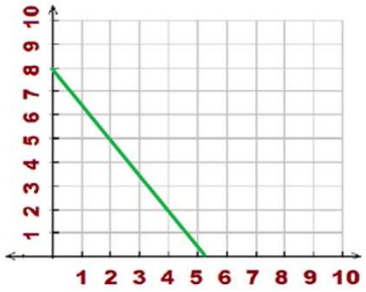
6. **Solve for y: 2x + y = 2z**

7. **Solve for x**



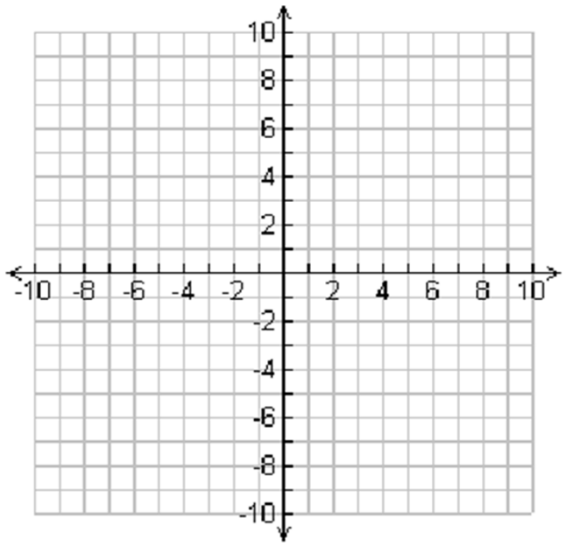
8. **A farmer has 160 acres planted. 1/4 is soy beans (s); he has twice as much soy bean planted as corn (c); and the rest is tomatoes (t). How many acres of tomatoes does he have planted?**

9. **Find the slope:**



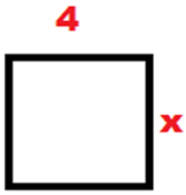
10. **Line A has a slope of -3; Line B has a slope of -3. Are they parallel?**

11. **Draw a line with a slope of 3, and another with a slope of -3. Make both lines go through point (1, 1).**

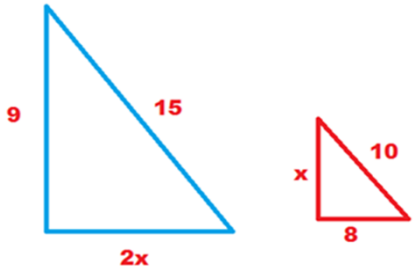


12. **Solve for x: 3x + 5 = 2x - 6**

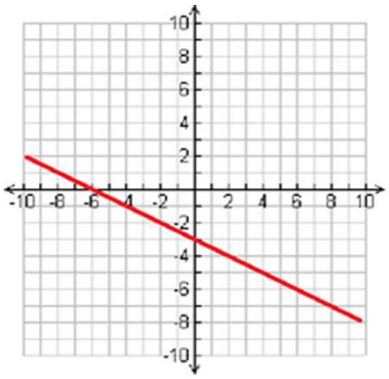
13. **The perimeter and the area of this shape are equal. What is the value of x?**



14. **The perimeter of the larger triangle is 150% of the perimeter of the smaller triangle. What is the value of x?**



15. **Write the equation for the line below.**

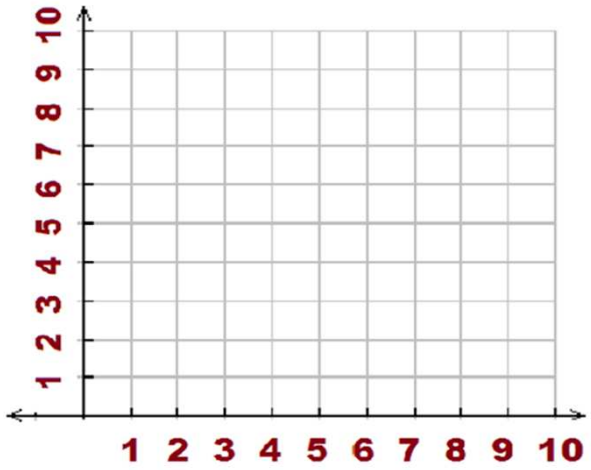


16. **What is the slope and the y intercept for the line that represents this equation: 6x + 3y = 15**

slope	y intercept

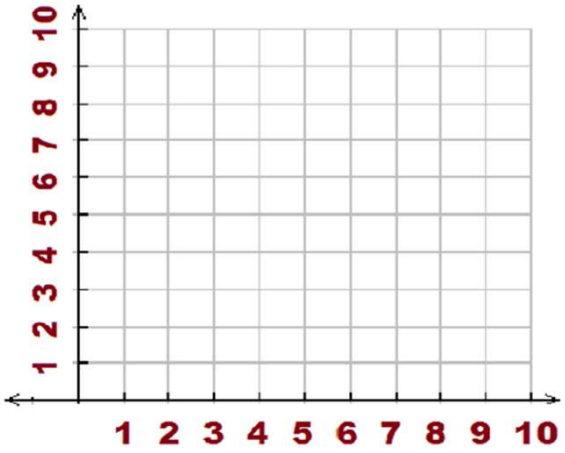
17. **Create a table and then graph this linear equation: y = 2x - 3**

x					
y = 3x - 3					



18. **A taxi charges (T) $4 plus $.50 per mile. Create an equation to determine what the taxi charge would be for any miles traveled (m). Create a table showing what the cost would be for 1 mile, 3 miles, 5 miles, 7 miles and 9 miles. Graph the data in this table.**

m	1	3	5	7	9



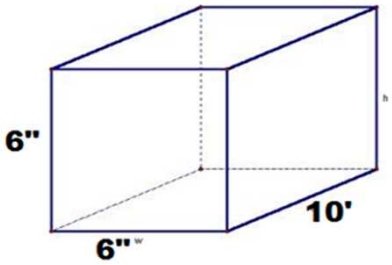
19. **Solve these equations for the variable.**

4p - 6 = 42	
2z + 5z - 15 = 13	
48 = 6z - 12	
16 - 3a = 22	

20. **You have dinner at Louie's and the total comes to $11.50. You ordered lasagna and a salad. The salad cost $2.50, and you left a tip of 15% of the bill. How much was the lasagna?**

21. **Last year, on average, 625 people attended each basketball game. This year, so far you have played 3 games and the attendance was 560, 640 and 675. How many people need to see the 4th game to reach an average attendance of 625 for the 4 games?**

22. **What are the dimensions of this rectangular prism in centimeters? (1" = 2.54 cm)**



23. **Your car's gas mileage is 28 miles per gallon. What is the gas mileage in kilometers per liter? (1 mile = 1.61 km; 1 gal = 3.785 liters)**

24. **Please make the following conversion**

measure	to	conversion factor	answer
40 lbs	kg	1 lb = .454 kg	
7 minutes	seconds		
12 liters	gallons	1 liter = .264 gal	
25 miles	km	1 m / 1.61 km	

25. **You have a picture which you want to frame. The picture is 24" wide. You have a frame that is 58 cm wide. Will the picture fit in this frame? (1" = 2.54 cm)**

Results			
%	?'s	Wrong	Concept
	19-21		Solving One- and Two-Step Equations
	12-14		Solving Equations with Variables on Both Sides
	1-5		Rewriting Equations and Formulas
	22-25		Converting Units of Measure
	17-18		Graphing Linear Equations with Tables
	9-11		Finding the Slope of a Line
	15-16		Graphing Linear Equations in Slope-Intercept Form
	6-8		Solving Systems of Equations
		0	Total