MasterMath

Name _____

7th Grade Quarter 1 Exam

Date _____

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

CUCC

1. Convert these rational numbers to decimals.

rational number	decimal equivalent
4/5	

rational number	decimal equivalent
-6 1/8	

rational number	decimal equivalent
25/22	

2. Write these decimals as a fraction or mixed number in simplest form.

decimal	fraction or mixed number
.75	

decimal	fraction or mixed number
3.6	

decimal	fraction or mixed number
1.37	

3. Joe had 6 hits in 14 times at bat. Joshua had 16 hits in 40 times at bat. Batting average equals number of hits divided by number of times at bat. Who had the higher batting average?

4. Your recipe for cookies requires 2 5/8 cups of flour. You want to make a double recipe, and have 5 1/4 cups of flour. Do you have enough flour?

5. You and your friends are doing better in track, as shown by the changes in your times in the 100 meter dash. The table shows the improvement in each of your last races over the previous race. What was the mean improvement?

Friend	Improvement
Jane	-2.15
Mary	-1.22
Estel	-.75
Sophia	-1.68

6. How many .75 pound bags of sugar can be made from a 6 pound bag of sugar?

7. Assume a = -3, b = 2, and c = -5. Solve this expressions: (a/b) * c

8. A scuba diver descends 60 feet in four minutes. What integer represents the divers rate of change in depth per minute?

9. Find the next 2 numbers in the pattern: -4, 12, -36,.....

10. Two integers, a and b, have a product of 20. What is the least possible sum of a and b?

11. Complete these statements with either <, >, or =:

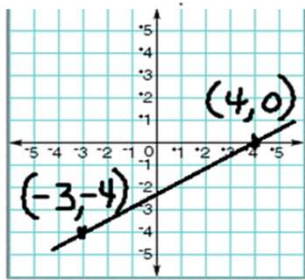|	<, >, or =	
2		-|-5|
-|-42|		25
|-25|		25

12. Order these Integers from least to greatest:
    6, -55, |-22|, |-75|, 16, |-1|, |12|

13. What is the slope of this line?

14. What is the slope of the line running through these points: (6, -5), (-3, -8)

15. Your family took a trip to Colorado. On the 1st day, you traveled 450 miles in 10 hours. On the 2nd day, you traveled 300 miles in 6 hours. For the 2 days of driving, what was your average miles per hour?

16. You can buy a large, 32 oz bottle of orange juice for $4.80, or a smaller, 18 oz bottle for $3.60. What is the unit rate of each?

size	unit rate
18 oz.	
32 oz.	

17. Find the unit rate: 195 miles on 15 gallons of gas

Rate	What	per	What
		per	

18. **Solve for x: 16 + x = 29**

19. **The perimeter of this triangle is 29". Two of the side have equal lengths of 9". What is the length of the third side?**
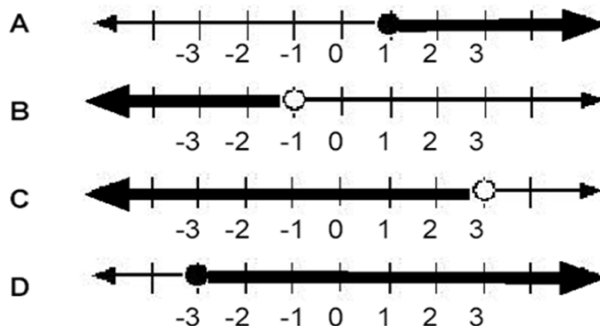
20. **Solve for z: 3z = 36**

21. **Two-thirds of the households in your town subscribe to the paper. The paper has subscriptions with one hundred and twenty households. How many household are in your town?**

22. **A number divided by ⅛ is 1/16. What is the number?**

23. **You are 3/4 as tall as your brother. You are 54" tall. How tall is your brother?**

24. **Which graph shows the solution to 2 - 2x < 0 ?**

A

B

C

D

25. **Solve this inequality: 1/2x + 3 < 19**

26. **There are 50 questions on the test and you need to get an 80%. How many of the 50 questions do you need to get correct?**

27. **You had 25 at bats, and your batting average is .400. How many hits did you have?**

28. A single batch of your mother's recipe for salsa calls for 3 tomatoes, 1/4 cup cilantra, 1/2 onion, and spices. Your having a party and need 5 batches of salsa. How many cups of onions do you need?
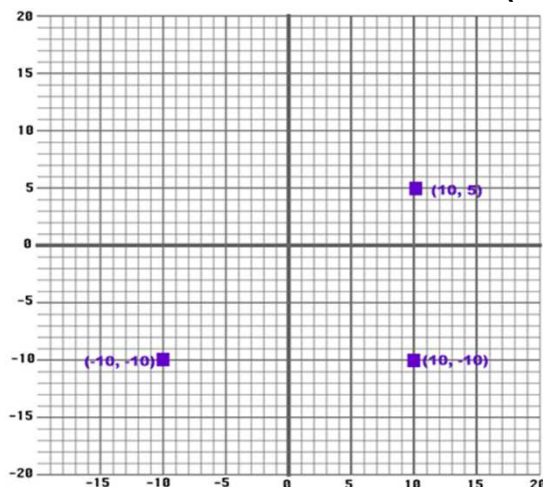
29. Solve for x: 3x - 6 = 30

30.

The school football team beat their rivals last weekend. They gained 250 yards rushing the ball. Fred gained twice as many yards as Mike. The rest of the team's runners gained 40 yards. How many yards did Mike gain?

31. You plan to make a vegetable garden that is 16' long by 12' wide. You have 66' of fencing. How much wider could you make your garden and still have enough fencing?

32. The temperature at 10AM in Fairbanks was -12°. Over the next 6 hours, the temperature increased by 25°. What was the temperature at 4PM?

33. You've saved up $10, but want a dress that costs $35. Your Mother agrees to lend you $15, and your Dad agrees to lend you $30, saying maybe you'd also find some shoes to go with the dress. You do find some shoes, and they are on sale for $30. Do you have enough money to buy both the dress and the shoes? How much extra money do you have, or how many more dollars do you need?

34. Three corners (or vertices) of a square are shown in this figure. What are the coordinates ot the fourth vertex (corner)?

35. What ordered pair is 4 units left and 2 units up from (-2, 4)?

36. Two points on a line are (2, 2) and (-3, -3). Is (4, -4) on the line?

37. Are these situations proportional?
   1. $65 for 5 hours
   2. $115 for 9 hours

38. You had 16 hits in 40 times at bat. Your brother had 12 hits in 30 times at bat. Were your batting averages proportional?

39. Two triangles have these dimensions. Are they proportional?

Triangle	height	base
1	10	15
2	15	20

Results			
%	**?'s**	**Wrong**	**Concept**
	11-12		Integers and Absolute Value
	32-33		Adding and Subtracting Integers
	7-10		Multiplying and Dividing Integers
	34-36		The Coordinate Plane
	1-6		Operations with Rational Numbers
	18-19		Solving Algebraic Expressions with Addition and Subtraction
	20-23		Solving Algebraic Expressions with Multiplication and Division
	29-31		Solving Two-Step Algebraic Expressions
	24-25		Solving Inequalities
	15-17		Ratios and Rates
	37-39		Proportions
	26-28		Writing and Solving Proportions
	13-14		Slope
		0	Total