6th Grade Math- Enrichment Geometry Project
Due by Friday February 2nd.

You will need to review the project below to complete by Friday, February 2nd. They will be required to follow the exact instructions/directions for the project. Please take pride in the entire process and complete your project on time!

Life in a Geometrical Town

Materials Needed (but not limited to the following):
Pencil, notebook paper, ruler, crayons, markers, colored pencils, glue, construction Paper, poster board, large construction paper or foam board.

Directions:
Before creating your final project, make a rough draft of your map on notebook paper. Use the rough draft to sketch out where things will go on your final map.

1. Draw 3 parallel roads, and name them. (The names can be real or made up.) Use a ruler to draw all of your lines.
2. Draw 2 roads/streets that intersect to form an obtuse angle, and name these roads.
3. Draw 2 roads/streets that intersect to form an acute angle. Name these roads.
4. Take a sheet of construction paper. You will create 10 different shapes to cut out and glue onto your poster board. (hint…2-D)
5. The shapes you have cut out are the buildings in your town. Each building needs to have a name with a math term. (Ex: Triangle Bank, Pentagon Market, Octagon Police Station, etc..)
6. In the bottom left hand corner, draw a park that is in the shape of a square. In the square draw a small circle sandbox, a rectangle swimming pool, a round pond, and a picnic table that is a right triangle.
7. Pick 5 other things to put on your map. Some possibilities are, but not limited to:
    - Swings
    - Extra Roads
    - Cars & Trucks on roads
    - Traffic Signs
    - A railroad
    - A bus station
    - A river
    - Extra building
8. Use crayons, markers, or colored pencils to make your map colorful & attractive.
9. Give your town a name & write it at the top.

Requirement	Points	Your Points
Draw 3 parallel roads, and name them. (The names can be real or made up.) Use a ruler to draw all of your lines	**10**	
Draw 2 roads/streets that intersect to form an obtuse angle, and name these roads.	**10**	
Draw 2 roads/streets that intersect to form an acute angle. Name these roads.	**10**	
Take a sheet of construction paper. You will create 10 different shapes to cut out and glue onto your poster board. (hint…2-D)	**10**	
The shapes you have cut out are the buildings in your town. Each building needs to have a name with a math term. (Ex: Triangle Bank, Pentagon Market, Octagon Police Station, etc.)	**10**	
In the bottom left hand corner, draw a park that is in the shape of a square (3 points). In the square draw a small circle sandbox (3 pts.), a rectangle swimming pool (3 pts.), a round pond (3 pts.), and a picnic table that is a right triangle (3 pts.).	**15**	
Pick 5 other things to put on your map. Some possibilities are, but not limited to (3 points each): • Swings • Extra Roads • Cars & Trucks on roads • Traffic Signs • A railroad • A bus station • A river • Extra building	**15**	
Use crayons, markers, or colored pencils to make your map colorful & attractive.	**10**	
Give your town a name & write it at the top.	**10**	

Total: **100** _____

MATH EXTENSIONS MENU

Investigate the lives of several mathematicians to discover what it is like to be a mathematician. Compare the experiences of mathematicians from different backgrounds or cultures.	Conduct a scientific experiment and explain the math required to complete the experiment.	Research and describe the connections between mathematics and a field in the fine arts, such as photography, sculpture, music, composing, drama, or stage direction.
Create a story filled with as many math-related puns as possible. The glossaries of math textbooks might be helpful resources.	**Student Choice**	Conduct a survey of students in the class on any topic of interest. Translate the results into statistical representations.
Investigate and describe the use of mathematics in athletics. Try to create a system to improve scoring practices.	Discover the history of the use of math programs in schools since 1945. Observe and describe the trends.	Study the use of the metric system in most countries. Hypothesize why it is not used in the U.S., and create a method to get the U.S. to use it.

Extra Practice Chapter 5

LESSON 5-1

1. There are 18 girls on the dance team. Barrettes are sold in packs of 6. Ponytail holders are sold in packs of 2. What is the least number of packs they could buy so that each girl has a barrette and a ponytail holder and none are left over?

Find the least common multiple (LCM).

2. 9 and 15
3. 12 and 16
4. 10 and 12
5. 3, 4, and 5

LESSON 5-2

Add or subtract. Write each answer in simplest form.

6. $\frac{3}{5} + \frac{2}{3}$
7. $\frac{7}{8} - \frac{1}{6}$
8. $\frac{1}{3} + \frac{1}{2}$

9. About $\frac{1}{3}$ of the animals at the zoo are birds. The mammals make up $\frac{2}{5}$ of the zoo's population. What fraction of the zoo's animals are mammals or birds?

LESSON 5-3

Find each sum or difference. Write the answer in simplest form.

10. $18\frac{1}{3} + 16\frac{1}{6}$
11. $5\frac{3}{4} + 3\frac{5}{12}$
12. $12\frac{1}{2} - 8\frac{2}{5}$

13. Joan has a rottweiler and a Chihuahua. The rottweiler weighs $99\frac{1}{2}$ lb, and the Chihuahua weighs $3\frac{1}{4}$ lb. How much more does Joan's rottweiler weigh than her Chihuahua?

LESSON 5-4

Subtract. Write each answer in simplest form.

14. $4\frac{2}{5} - 2\frac{9}{10}$
15. $9\frac{1}{6} - 5\frac{5}{6}$
16. $6 - 1\frac{7}{12}$

17. Adam purchased a 10 lb bag of dog food. His dog ate $7\frac{1}{3}$ lb. of dog food in one week. How many pounds of dog food were left after one week?

LESSON 5-5

Solve each equation. Write the solution in simplest form.

18. $a + 5\frac{3}{10} = 9$
19. $1\frac{3}{8} = x - 2\frac{1}{4}$
20. $6\frac{5}{6} = t + 1\frac{2}{3}$

21. Taylor needs to change a lightbulb that is $12\frac{1}{3}$ feet above the floor. Without a ladder, Taylor can reach $6\frac{1}{2}$ feet. How tall must her ladder be in order for her to reach the lightbulb?

LESSON 5-6

Multiply. Write each answer in simplest form.

22. $2 \cdot \frac{1}{5}$
23. $3 \cdot \frac{1}{6}$
24. $2 \cdot \frac{2}{11}$

25. There are 16 players on the baseball team. Of these players, $\frac{1}{4}$ are girls. How many girls play on the baseball team?

LESSON 5-7

Multiply. Write each answer in simplest form.

26. $\frac{1}{10} \cdot \frac{5}{6}$

27. $\frac{8}{9} \cdot \frac{3}{4}$

28. $\frac{5}{7} \cdot \frac{3}{10}$

Evaluate the expression $a \cdot \frac{1}{10}$ for each value of a. Write the answer in simplest form.

29. $a = \frac{4}{5}$

30. $a = \frac{2}{3}$

31. $a = \frac{5}{9}$

32. Camille spent $\frac{2}{5}$ of her weekly allowance on meals in restaurants. She spent $\frac{1}{2}$ of that money on pizza. What fraction of her weekly allowance did Camille spend on pizza?

LESSON 5-8

Multiply. Write each answer in simplest form.

33. $\frac{1}{4} \cdot 1\frac{2}{3}$

34. $2\frac{3}{5} \cdot \frac{1}{3}$

35. $\frac{7}{8} \cdot 1\frac{1}{3}$

Find each product. Write the answer in simplest form.

36. $1\frac{1}{3} \cdot 1\frac{3}{5}$

37. $4 \cdot 2\frac{6}{7}$

38. $\frac{2}{5}$ of $4\frac{1}{2}$

39. An art class has 18 students, and $\frac{1}{3}$ of the students are painting. How many of the students in the class are painting?

LESSON 5-9

Find the reciprocal.

40. $\frac{7}{9}$

41. $\frac{2}{13}$

42. $\frac{1}{12}$

43. $\frac{8}{5}$

Divide. Write each answer in simplest form.

44. $\frac{1}{6} \div 3$

45. $\frac{4}{7} \div 2$

46. $2\frac{1}{2} \div 1\frac{3}{4}$

47. Debbie bought $8\frac{1}{2}$ lb of ground turkey. She packed the turkey in $\frac{1}{2}$ lb containers and put them in the freezer. How many containers of ground turkey did she pack?

LESSON 5-10

Solve each equation. Write the answer in simplest form.

48. $\frac{3}{5}a = 12$

49. $6b = \frac{3}{7}$

50. $\frac{3}{8}x = 5$

51. $3s = \frac{7}{9}$

52. $\frac{5}{12}m = 3$

53. $\frac{9}{10}t = 6$

54. Joanie used $\frac{2}{3}$ of a box of invitations to invite friends to her birthday party. If she sent out 12 invitations, how many total invitations were in the box?

DAY 51

NAME: _____

Solve each problem.

1. $56 - 39 =$ _____

2. $9 \times 40 =$ _____

3. $7\overline{)42}$

4. What is the value of the digit 9 in 4,729?

_____

5. Is $1\frac{2}{3}$ less than or greater than $1\frac{3}{4}$?

_____

6. $4 + 2 \cdot 5 + 3 =$ _____

7. ☐ % of 80 is 20.

8. Solve for *f*. $f + \frac{3}{8} = \frac{5}{8}$

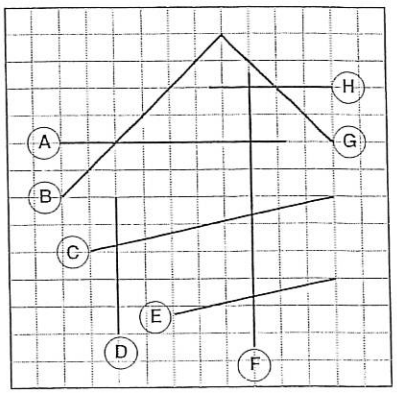
$f =$ _____

9. How many pints are in a quart?

_____

10. Which line is perpendicular to line B?

_____



11. Record the data in the table.
Trish has 2 brothers and 1 sister. Max doesn't have any siblings. Melissa has 2 brothers. Allison has 1 sister. Trent has a brother and a sister.

Child's Name	Brothers	Sisters

12. A farmer sold 250 of his sheep, bought 35 more sheep, and then bought 68 more sheep. After 3 died, he sold another 260. If he now has 190 sheep, how many sheep did he have at the beginning?

_____

SCORE

1. Y N
2. Y N
3. Y N
4. Y N
5. Y N
6. Y N
7. Y N
8. Y N
9. Y N
10. Y N
11. Y N
12. Y N

___ / 12
Total

Ready To Go On?

Quiz for Lessons 2-4 Through 2-8

2-4 Equations and Their Solutions

Determine whether the given value of the variable is a solution.

1. $c - 13 = 54$ for $c = 67$
2. $5r = 65$ for $r = 15$
3. $48 \div x = 6$ for $x = 8$
4. Brady buys 2 notebooks and should get $3 back in change. The cashier gives him 12 quarters. Determine if Brady was given the correct amount of change.

2-5 Addition Equations

Solve each equation. Check your answers.

5. $p + 51 = 76$
6. $107 = 19 + j$
7. $45 = s + 27$
8. A large section of the original Great Wall of China is now in ruins. As measured today, the length of the wall is about 6,350 kilometers. When the length of the section now in ruins is included, the length of the wall is about 6,850 kilometers. Write and solve an equation to find the approximate length of the section of the Great Wall that is now in ruins.

2-6 Subtraction Equations

Solve each equation. Check your answers.

9. $k - 5 = 17$
10. $150 = p - 30$
11. $n - 24 = 72$
12. The Kingda Ka roller coaster at Six Flags® Great Adventure in New Jersey is taller than the Top Thrill Dragster located at Cedar Point™ in Ohio. The difference between their heights is 36 feet. The Top Thrill Dragster is 420 feet high. Write and solve an equation to find the height of Kingda Ka.

2-7 Multiplication Equations

Solve each equation. Check your answers.

13. $6f = 18$
14. $105 = 5d$
15. $11x = 99$
16. Taryn buys 8 identical glasses. Her total is $48 before tax. Write and solve an equation to find out how much Taryn pays per glass.

2-8 Division Equations

Solve each equation. Check your answers.

17. $10 = \frac{j}{9}$
18. $5 = \frac{t}{6}$
19. $\frac{r}{15} = 3$
20. Paula is baking peach pies for a bake sale. Each pie requires 2 pounds of peaches. She bakes 6 pies. Write and solve an equation to find how many pounds of peaches Paula had to buy.

DAY **52**

NAME: _____

DIRECTIONS Solve each problem.

SCORE

1. Ⓨ Ⓝ
2. Ⓨ Ⓝ
3. Ⓨ Ⓝ
4. Ⓨ Ⓝ
5. Ⓨ Ⓝ
6. Ⓨ Ⓝ
7. Ⓨ Ⓝ
8. Ⓨ Ⓝ
9. Ⓨ Ⓝ
10. Ⓨ Ⓝ
11. Ⓨ Ⓝ
12. Ⓨ Ⓝ

___ / 12
Total

1. Calculate 49 more than 567.

_____

2. 26 x 10 = _____

3. –670 ÷ 10 = _____

4. Write the expanded notation for 4,237.

_____

5. $-\frac{1}{11} + -\frac{3}{11} =$ _____

6. Complete the input/output chart. Look for a pattern and write the rule.

Input	42	52	62	72	82	92
Output	56	66	76			

_____

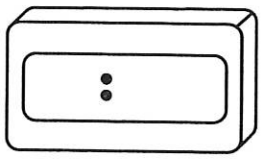
_____

7. 30 ÷ ☐ = 5

8. Find *m*. $8m = 16$

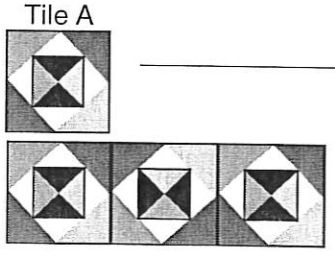
m = _____

9. Write the time 4:39 P.M. in a 24-hour time format.



10. To make this pattern, has Tile A been *reflected*, *translated*, or *rotated*?

Tile A



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11.

Student	Savings Amount
Jack	$144
Trevor	$137
Brandon	$85
Michael	$202

Write the savings amounts in order from least to greatest.

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12. Mr. Kendrik was 25 years old when his daughter Melissa was born. If Melissa was born in 2001, in what year was Mr. Kendrik born?

_____