Summer Math Review

Entering 7th Grade Packet

Dear Parents:

I have prepared this optional math packet for our students to complete by gathering information from on-line sources and various schools in an effort to prepare them for a successful school year next year.

This work is not intended to be completed in one sitting, but should be done at a steady pace throughout the course of the summer. I have included an answer key so that the students can check their answers. This packet will NOT be graded, nor will it be collected at the beginning of the year. The packet is just designed to provide students with extra practice that will support them with their retention of the basic mathematical skills which are required for the 7th grade. The students can be assisted during their completion of the packet by anyone, and I encourage dialogue surrounding any tough questions.

I have enjoyed teaching your children this year, and I wish you a very happy, healthy and safe summer!

Enjoy,

Mrs. Barth

Mrs. Barth

Website Used:

http://www.saintphilomena.org/files/Rising_7th_Grade_Summer_Packet_FOR_ALL_7th_Grade14_15.pdf

Formula Card:

Circle - $A = \pi \cdot r^2$ $C = \pi \cdot d$ $\pi \approx 3.14$

Rectangle - $A = l \cdot w$ $P = l + l + w + w$

Triangle - $A = \frac{1}{2} b \cdot h$ $P = sum\ of\ all\ of\ the\ sides$

Parallelogram - $A = b \cdot h$ $P = sum\ of\ all\ of\ the\ sides$

Rectangular prism - $V = l \cdot w \cdot h$

Examples of different problems and the work that should accompany the problems:

Ex. 1) $\frac{2}{3} + \frac{4}{5} =$

$= \frac{10}{15} + \frac{12}{15}$

$= \frac{22}{15}$

Ex. 2) Find the area of a circle with a radius of 5 in. $A = \pi r^2$

$A = \pi \cdot 5^2$

$A = 25\pi\ in.^2\ or\ 78.5\ in.^2$

Ex. 3) $3\frac{1}{4} - 5\frac{2}{3} =$

$= \frac{13}{4} - \frac{17}{3}$

$= \frac{39}{12} - \frac{68}{12}$

$= -\frac{29}{12}$

$= -2\frac{5}{12}$

Please show any work you have done to complete each problem.

Show your work! Show your work! Show your work!

Show your work! Show your work! Show your work!

Name _____

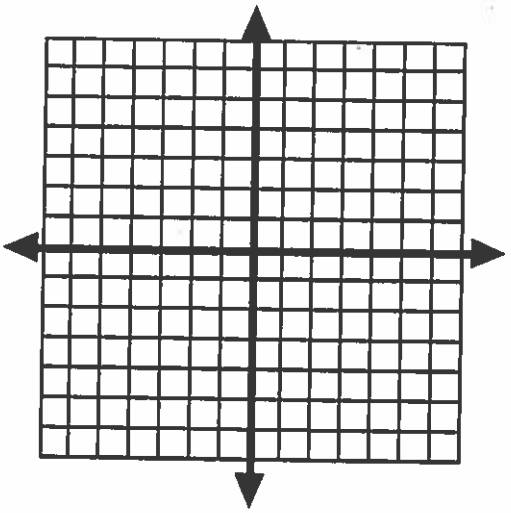
Summer Review - Week # 1

Complete each of the problems below. Please show all of your work.

1) When they go to the movies the Hernandez family uses the formula, $4.50C + 9.75A = T$, to determine the total cost (T) of their evening.
It costs $4.50 for each of the children's tickets and $9.75 each, for the adults.
If there are three adults going and four children, how much will it cost the Rodriguez family to go to the movies tonight?

2) List the quadrant or axis that each point is located in. Then graph each point on the coordinate plane.

Coordinate pair	Quadrant or Axis
(4, 0)	
(-2, -2)	
(1, 1)	
(2, 4)	
(-3, -2)	
(-5, 1)	
(-3, -1)	
(-1, -2)	



3) Fred received the following scores for his gymnastics routine: 8.5, 7.8, 8.0, 6.8, 7.1, 7.6. To figure out his score, the judges drop the highest and lowest score and then average the rest of his scores.

a) What is Fred's gymnastics score for the meet?

b) How much better or worse would he have done if the judges did not drop the highest and lowest scores?

Show your work! Show your work! Show your work!

Show your work! Show your work! Show your work!

4) Jeremy has saved $11,000 to go towards the purchase of his new car. If the new Civic costs $17,500 and the sales tax is 8%, how much more money does Jeremy need?

5) Find the LCM of the following sets of numbers.

a) 8 and 12 b) 20 and 30 c) 7 and 35

(Reduce ***BEFORE*** you multiply across!)

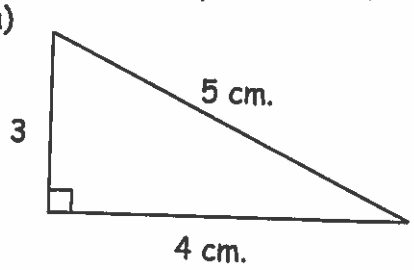
6) $\frac{27}{36} \cdot \frac{18}{9} =$

7) $\frac{55}{44} \cdot \frac{44}{66} =$

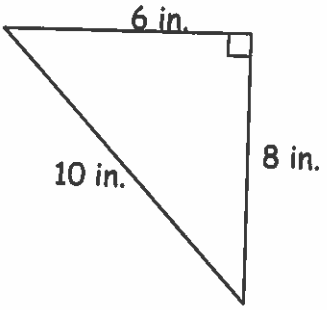
8) $\frac{15}{18} \cdot \frac{30}{42} =$

9) Find the area and perimeter of the following triangles.

a)



b)



A =

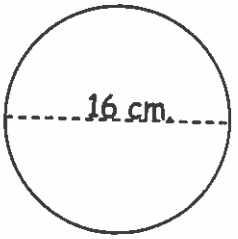
P =

A =

P =

10) Find the area and circumference of the circle.

A = C =



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Name _____

Summer Review - Week # 2

Complete each of the problems below. Please show all of your work.

1) Find the GCF of the following sets of numbers.
   a) 36 and 100 b) 54 and 72 c) 80 and 180

(Reduce ***BEFORE*** you multiply across!)

2) $\frac{20}{76} \cdot \frac{38}{15} =$

3) $\frac{16}{50} \cdot \frac{36}{48} =$

4) $\frac{10}{15} \cdot \frac{30}{46} =$

5) Georgia received the following scores for her practice ACT test: 28, 31, 24, 28, 31, 28.
   a) What is the mean of her practice exam scores?
   b) What is the median of her practice exam scores?
   c) What is the mode of her practice exam scores?
   d) What is the range of her practice exam scores?

6) If k = -3, evaluate the following:
   a) 2k + 7(9) b) $5+k^2-12$ c) $12+6 \bullet k$

7) Francesca has five green Cooper shirts, 3 black shirts, a gold shirt, and 8 white shirts. If she chooses randomly, what is the probability she will pick a black shirt to wear on Friday?

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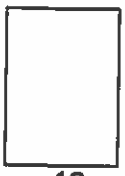
Find the **sum** of the *area* **and** *perimeter* of the following figures:

8)



Area =

Perimeter =

Sum =

9)

Area =

Perimeter =

Sum =

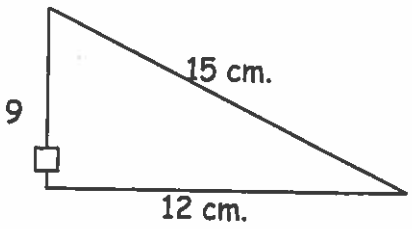
10) $1\frac{3}{4}+5.7=$

11) $4.8+7\frac{2}{5}=$

12) $3.4-15\frac{7}{10}=$

13) Find the area and perimeter of the following triangles.

a)



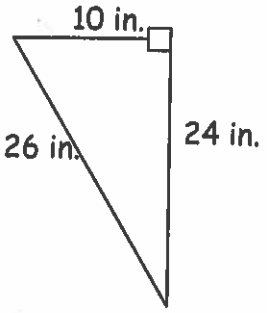
A =

P =

b)

A =

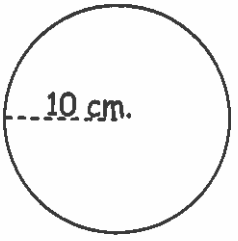
P =



14) Find the area and circumference of the circle.

A =

C =



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Name _____

Summer Review - Week #3

Complete each of the problems below. Please show all of your work.

1) Simplify:

a) $6\frac{3}{4} - 10\frac{5}{9}$

b) $3\frac{3}{11} + 7\frac{1}{11}$

c) $3\frac{1}{3} - 4\frac{7}{8}$

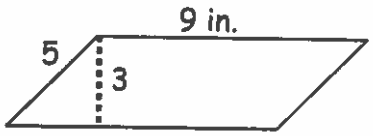
d) $3\frac{1}{6} \cdot 1\frac{3}{10}$

e) $9\frac{2}{7} \div 3\frac{1}{2}$

f) $2\frac{1}{5} \cdot 3\frac{5}{7}$

2) Find the area and perimeter of the figures.

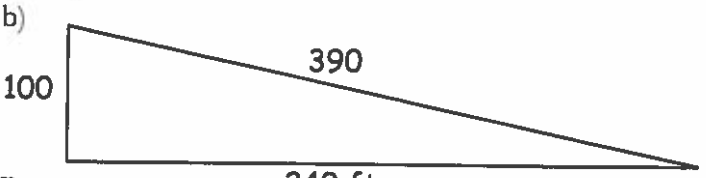
a)



P =

A =

b)

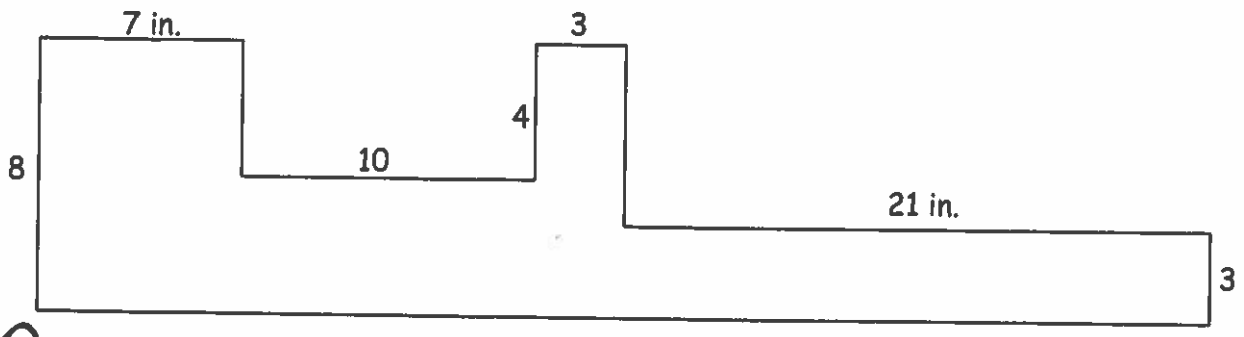


P =

A =

3) Find the ***sum*** of the <u>perimeter and area</u> of the shape.

P = A = Sum of perimeter and area =



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Show your work! Show your work! Show your work!

4) Place the correct symbol in between each set of fractions. (<, >, or =)
Change to common denominators first!!!

a) $\frac{5}{7}$ $\frac{5}{6}$ b) $\frac{1}{3}$ $\frac{1}{4}$ c) $\frac{2}{9}$ $\frac{2}{8}$ d) $\frac{4}{8}$ $\frac{3}{6}$

e) $\frac{2}{3}$ $\frac{3}{4}$ f) $\frac{6}{7}$ $\frac{3}{4}$ g)) $4\frac{3}{6}$ $5\frac{9}{18}$ h) $1\frac{2}{3}$ $1\frac{3}{5}$

5) George and his two friends are going to the movies. George has 3.4 lbs. of licorice to snack on while Jill has $2\frac{2}{5}$ lbs and Ben has $\frac{9}{10}$ of a pound. If they combine all of their licorice how much do they have together?

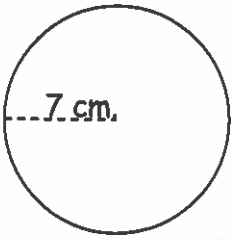
6) Simplify the following:

a) $7+2\cdot5$ b) $4-16\div8$ c) $7+6^2$ d) $3^2+9\cdot5$

7) Liam has bought 48 feet of fencing that he will use to build a pig pen. List 6 different dimensions he could create for his pen using the fencing he bought.

8) Find the area and circumference of the circle.

A = C =



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Name _____

Summer Review - Week # 4

Complete each of the problems below. Please show all of your work.

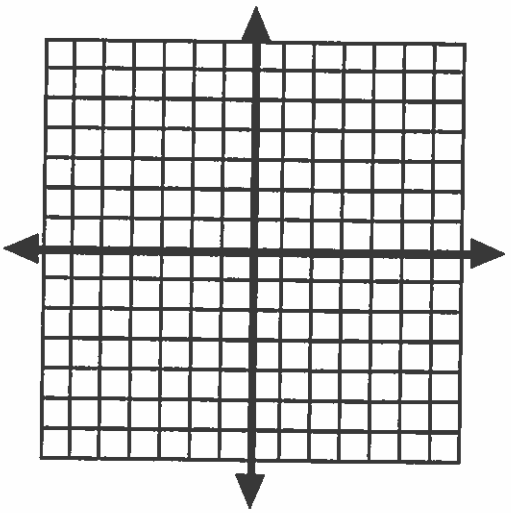
1) Place the correct symbol in between each set of fractions. (<, >, or =)
Change to common denominators first!!!

a) $\frac{2}{8} \quad \frac{3}{6}$ b) $\frac{1}{6} \quad \frac{1}{9}$ c) $\frac{4}{7} \quad \frac{4}{3}$ d) $\frac{3}{8} \quad \frac{15}{20}$

e) $\frac{24}{27} \quad \frac{8}{18}$ f) $\frac{1}{4} \quad \frac{3}{8}$ g)) $-7\frac{2}{3} \quad -7\frac{3}{4}$ h) $3\frac{3}{8} \quad 3\frac{5}{24}$

2) List the quadrant or axis that each point is located in. Then graph each point on the coordinate plane.

Coordinate pair	Quadrant or Axis
(2, -2)	
(0, -4)	
(-1, 3)	
(0, 6)	
(-1, -5)	
(-3, 3)	
(-1, -3)	
(-3, 0)	



3) Simplify the following:

a) $-4+6(-7)$ b) $8^2-3\cdot 2$ c) $(12-2)^2-8$ d) $156-8(2)$

4) Bill knows that the volume of a rectangular prism is 400 cm^3. The box is labeled with the length as 6.5 cm and the width as 1.5 cm. What is the approximate height of the box?

Show your work! Show your work! Show your work!

5) Lucy has 4 black outfits, 5 blue outfits, a white outfit, and a green one to choose from.

a) What is the probability she randomly chooses a red outfit to wear?

b) What is the probability she randomly chooses a blue outfit to wear?

c) What is the probability she randomly chooses a black or green outfit to wear?

6) Simplify:

a) $2\frac{1}{6} - 5\frac{1}{4}$

b) $-4\frac{1}{7} - 9\frac{2}{7}$

c) $6\frac{4}{9} - \frac{2}{3}$

d) $16 \cdot 2\frac{1}{4}$

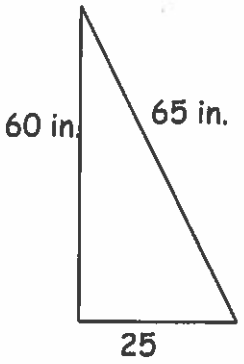
e) $\frac{4}{9} \div \frac{8}{9}$

f) $6\frac{1}{2} \cdot 2\frac{2}{7}$

7) Find the area and perimeter of the triangle.

A =

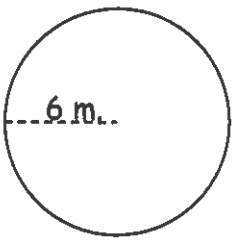
P =



8) Find the area and circumference of the circle.

A =

C =



Show your work! Show your work! Show your work!
Show your work! Show your work! Show your work!

Name _____

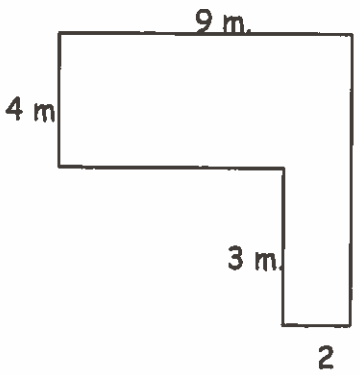
Summer Review - Week # 5

Complete each of the problems below. Please show all of your work.

1) Beth has brought $1\frac{3}{7}$ lbs. of strawberries to her friend Lisa's house to make pies.

How many more lbs. do they need if the recipe calls for $5\frac{2}{3}$ lbs.?

2) Find the area and perimeter of the figure.



3) Find the GCF of each set of numbers.

a) 12, 24, 40 b) 9, 12, 15 c) 14, 22, 24

4) Complete each of the problems.

a) $\frac{3}{4} \cdot \frac{16}{18} =$ b) $1\frac{1}{3} \div 3\frac{2}{3} =$ c) $3\frac{3}{4} + 5\frac{1}{2} =$

5) Find the prime factorization of the following numbers.

a) 80 b) 12 c) 45

Show your work! Show your work! Show your work!
Show your work! Show your work! Show your work!

6) Simplify the following:

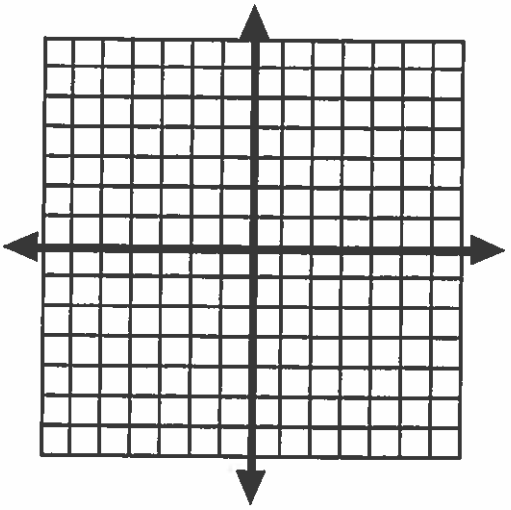
a) $-41 - 22(2)$ b) $3^2 - 5 \cdot 2$ c) $(3-7)^2 + 13$

7) If r = -8, evaluate the following:

a) $-3r + 9$ b) $r - 10$ c) $71 - r$

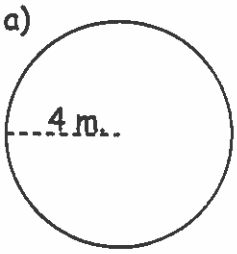
8) List the quadrant or axis that each point is located in. Then graph each point on the coordinate plane.

Coordinate pair	Quadrant or Axis
(5, -2)	
(-3, -4)	
(2, 3)	
(3, 6)	
(-4, -5)	
(-1, 3)	
(-4, -3)	
(-5, 0)	



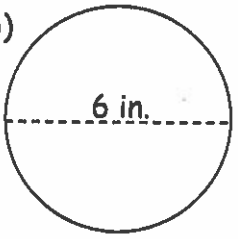
9) Find the area and circumference of the circles.

a)



A = C =

b)



A = C =

Show your work! Show your work! Show your work!
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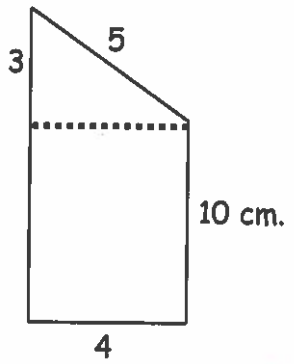
Name _____

Summer Review - Week # 6

Complete each of the problems below. Please show all of your work.

1) Ewa bought $7\frac{1}{8}$ lbs. of cashews for $3.50 per lb. How much did she spend?

2) Find the area and perimeter of the figure.



3) Find the LCM of each set of numbers.

a) 2, 3, 5 b) 5, 6, 8 c) 8, 9, 12

4) Complete each of the problems.

a) $\frac{3}{7} - 2\frac{1}{3} =$ b) $3\frac{1}{5} \cdot 5\frac{1}{9} =$ c) $-4\frac{2}{8} + 3\frac{1}{3} =$

5) What number does each prime factorization represent?

a) $2 \cdot 3 \cdot 5^2$ b) $2 \cdot 11^2$ c) $3^2 \cdot 7$

6) Simplify the following:

a) $-5 + 4(9)$ b) $4^2 + 9 \cdot 8$ c) $(11-14)^2 - 6$

Show your work! Show your work! Show your work!

Show your work! Show your work! Show your work!

7) If y = -4, evaluate the following:

a) $2y + 7$ b) $y - 8$ c) $5 - y$

8) In the last six games, the quarterback of the Chicago Bears fumbled the ball 2, 1, 1, 5, 3, and 9 times.

a) What is the median of the number of times he fumbled?

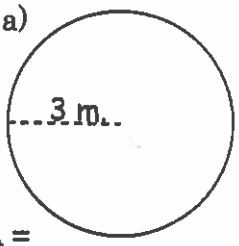
b) What is the mode of the number of times he fumbled?

c) What is the range of the number of times he fumbled?

d) What is the mean of the number of times he fumbled?

9) Find the area and circumference of the circles.

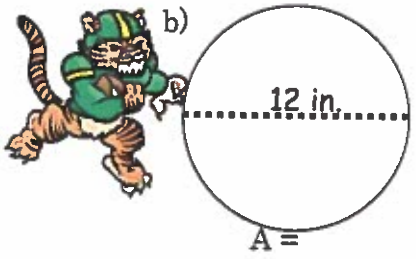
a)



A =

C =

b)



A =

C =

Simplify the following:

10) $\frac{54}{38} \cdot \frac{18}{27} =$

11) $\left(\frac{20}{22}\right)\left(\frac{11}{65}\right) =$

12) $\frac{5}{6} + \frac{4}{6} =$

Show your work! Show your work! Show your work!

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Name _____

Summer Review - Week # 7

Complete each of the problems below. Please show all of your work.

1) $\frac{3}{4}+\frac{3}{10}=$

2) $\frac{5}{7}-\frac{3}{4}=$

3) $3\frac{3}{5}-7\frac{1}{8}=$

4) Find the LCM of the following numbers:

a) 7, 9 b) 9, 15 c) 13, 26 d) 2, 4, 6, 12

5) Find the GCF of the following numbers:

a) 15, 25 b) 72, 84 c) 40, 150 d) 60, 90

Simplify the following:

6) $\frac{30}{20}\cdot\frac{18}{27}=$

7) $\left(\frac{30}{22}\right)\left(\frac{12}{25}\right)=$

8) $\frac{1}{7}+\frac{2}{14}=$

9) If $k = -9$, evaluate the following:

a) $2k - 5$ b) $15 - k$ c) $\frac{k+9}{6}$ d) $2k^2-8$

10) Find the volume of the rectangular prism.

Show your work! Show your work! Show your work!
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11) Susan has earned $38 babysitting. 30% of her earnings go into the bank every month. How much of her $38 should she put in the bank?

12) Sally exercises 45 min. a day at a minimum.
Which of the following inequalities represents how much she exercises?

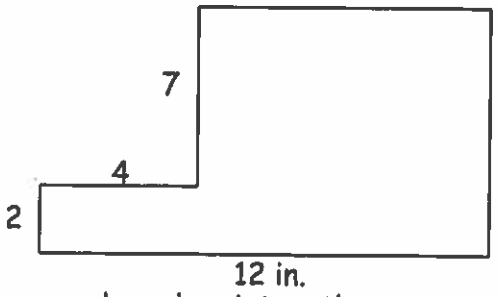
a) $x \leq 45$ b) $x \geq 45$ c) $x < 45$ d) $x > 45$

Graph the one you chose.

13) Find the perimeter and area of the figure.

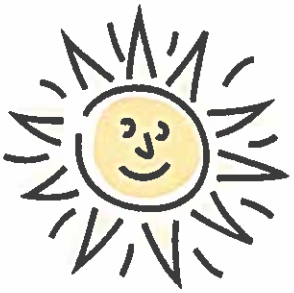
P =

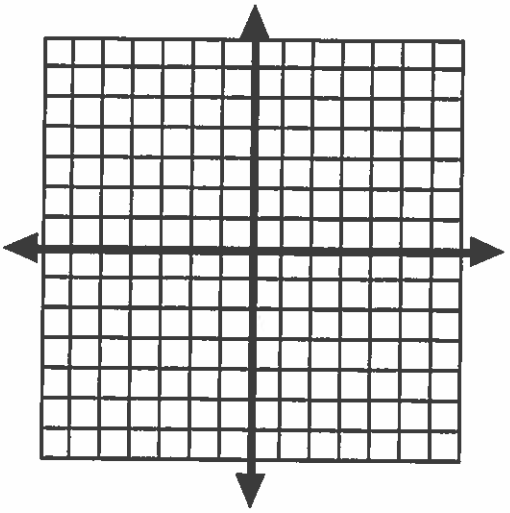
A =



14) List the quadrant or axis that each point is located in. Then graph each point on the coordinate plane.

Coordinate pair	Quadrant or Axis
(4, -3)	
(-2, -2)	
(1, 4)	
(2, 4)	
(-3, -3)	
(-5, 2)	
(-3, -1)	
(-1, 2)	





15) Place the correct symbol in between each set of fractions. (<, >, or =)
Change to common denominators first!!!

a) $\frac{4}{9} \quad \frac{3}{5}$ b) $\frac{1}{5} \quad \frac{1}{4}$ c) $\frac{2}{7} \quad \frac{2}{9}$ d) $\frac{3}{4} \quad \frac{7}{8}$

Show your work! Show your work! Show your work!
Show your work! Show your work! Show your work!

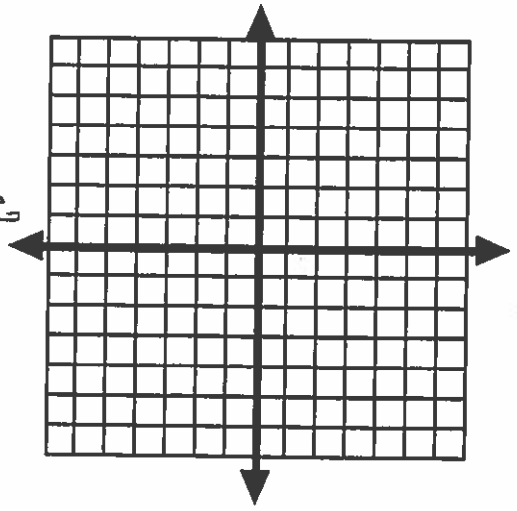
Name _____

Summer Review - Week # 8

Complete each of the problems below. Please show all of your work.

1) List the quadrant or axis that each point is located in. Then graph each point on the coordinate plane.

Coordinate pair	Quadrant or Axis
(3, -2)	
(-1, -4)	
(0, 3)	
(1, 6)	
(-2, -5)	
(-4, 3)	
(-2, -3)	
(2, 0)	



2) Simplify:

a) $2\frac{2}{3}-3\frac{3}{4}$.

b) $1\frac{3}{8}+5\frac{7}{8}$

c) $4\frac{1}{9}-9\frac{2}{3}$

3) Place the correct symbol in between each set of fractions. (<, >, or =)
Change to common denominators first!!!

a) $\frac{5}{8}$ $\frac{1}{2}$

b) $\frac{1}{6}$ $\frac{1}{12}$

c) $\frac{2}{7}$ $\frac{4}{14}$

d) $\frac{20}{24}$ $\frac{5}{6}$

e) $\frac{8}{12}$ $\frac{7}{9}$

f) $\frac{2}{3}$ $\frac{20}{30}$

g)) $-2\frac{3}{5}$ $-1\frac{4}{7}$

h) $2\frac{5}{7}$ $2\frac{4}{5}$

Show your work! Show your work! Show your work!
Show your work! Show your work! Show your work!

4) Barry has one six sided dice numbered 1-6 that he rolls.

a) What is the probability he rolls a 5?

b) What is the probability he rolls a 3 or a 5?

c) What is the probability he rolls an odd number?

d) What is the probability he rolls an even number?

e) What is the probability he rolls a factor of 6?

f) What is the probability he rolls a factor of 39?

g) What is the probability he rolls a factor of 17?

h) What is the probability he rolls a 7?

i) What is the probability he rolls a number?

j) What is the probability he rolls a factor of 12?

k) What is the probability he rolls a factor of 60?

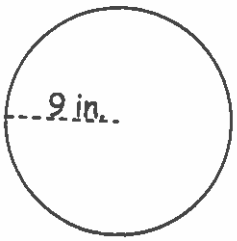
l) What is the probability he rolls a prime number?

m) What is the probability he does NOT roll a prime number?

5) Simplify the following:

a) $3+2(9)$ b) $9^2-7\cdot 2$ c) $(3-14)^2+12$ d) $17-15(-4)$

6) Find the **area** of the circle.



7) Find the *circumference* of the circle.

Show your work! Show your work! Show your work!
Show your work! Show your work! Show your work!

Name _____

Summer Review - Week #9

Complete each of the problems below. Please show all of your work.

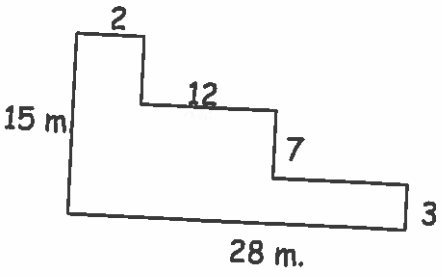
1) Simplify the following:

a) $-14+7(4)$ b) $7^2-2\cdot3$ c) $(92-82)^2+8$ d) $-18-2(6)$

2) Find the LCM of the following sets of numbers.

a) 6 and 8 b) 9 and 15 c) 5 and 6

3) Find the area and perimeter of the figure.



4) Find the GCF of the following sets of numbers.

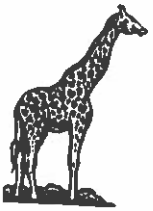
a) 20 and 75 b) 20 and 46 c) 16 and 48

5) Jerry ate the following number of sandwiches for each of the last five weeks: 13, 13, 12, 12, and 6.

Find each of the following:

Mean = Median =

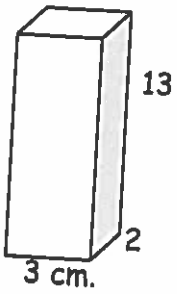
Mode = Range =



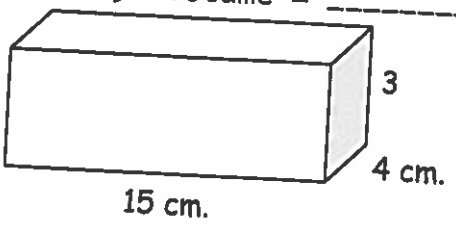
Show your work! Show your work! Show your work!
Show your work! Show your work! Show your work!

Find the volume of each of the rectangular prisms.

6) Volume = _____ cm^3



7) Volume = _____ cm^3



Complete each of the following problems:

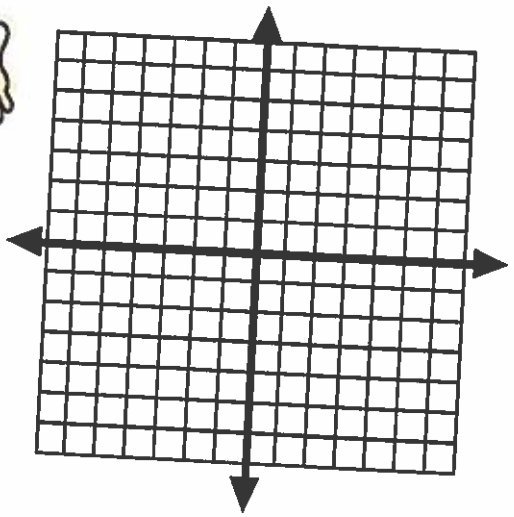
8) $\frac{5}{6}+\frac{3}{7}=$

9) $\frac{7}{12}+\frac{1}{5}=$

10) $\frac{1}{36}-\frac{1}{24}=$

11) List the quadrant or axis that each point is located in. Then graph each point on the coordinate plane.

Coordinate pair	Quadrant or Axis
(4, -2)	
(-2, -4)	
(1, 3)	
(2, 6)	
(-3, -5)	
(-5, 3)	
(-3, -3)	
(-1, 0)	



Name _____ Date _____

Solving Equations With Addition and Subtraction

$$16 + x = -14$$
$$16 + -16 + x = -14 + -16$$
$$x = -30$$

1. $x + 7 = -13$
2. $x + 7 = 4$
3. $-14 + y = -17$
4. $y - 11 = 14$
5. $y - 5 = -7$
6. $-20 + x = -80$
7. $6 + x = 29$
8. $a + 32 = -4$
9. $-2 = x - 2$
10. $-19 + y = 42$
11. $16 = z - 10$
12. $y + 73 = 0$
13. $-100 = b + (-72)$
14. $w - 5 = (8 - 13)$
15. $x + 2.5 = -4.7$
16. $a + 3.6 = -0.2$
17. $x - 6\frac{1}{4} = 12\frac{1}{2}$
18. $2\frac{1}{5} + x = -3\frac{1}{2}$
19. $n + \frac{1}{2} = \frac{3}{4}$
20. $b - 1\frac{1}{3} = -3\frac{5}{6}$

0-7424-1788-3 Alg

Name _____ Date _____

Solving Equations With Multiplication and Division

$2x = 12$

$\frac{2x}{2} = \frac{12}{2}$

$x = 6$

$-\frac{3}{4}y = 15$

$-\frac{4}{3} \cdot -\frac{3}{4}y = 15 \cdot -\frac{4}{3}$

$y = -20$

1. $3x = -21$
2. $-7y = 28$
3. $-28 = -196x$
4. $-15a = -45$
5. $-x = 17$
6. $-21 = -2x$
7. $-12b = -288$
8. $12x = -60$
9. $\frac{a}{5} = -6$
10. $-\frac{2}{5}y = -14$
11. $\frac{3x}{4} = -24$
12. $-\frac{x}{3} = \frac{4}{9}$
13. $-\frac{3}{7} = \frac{-a}{14}$
14. $3a = -\frac{1}{4}$
15. $\frac{a}{2.4} = 0.26$
16. $-\frac{1}{99}y = 0$
17. $-1.5x = 6$
18. $-12.5 = 4n$
19. $-3.7w = -11.1$
20. $\frac{y}{6} = -\frac{2}{3}$

0-7424-1788-3 *Algebra*

Show your work! Show your work! Show your work!

Answer Key

Week #1

1) \$47.25 2) x-axis, Q3, Q1, Q1, Q3, Q2, Q3, Q3 3) 7.63, no difference 4) \$7900

5) 24, 60, 35 6) $\frac{3}{2}$ 7) $\frac{5}{6}$ 8) $\frac{25}{42}$ 9) 6 cm^2, 12 cm, 24 in^2, 24 cm 10) 64π cm^2, 16π cm

Week #2

1) 4, 18, 20 2) $\frac{2}{3}$ 3) $\frac{6}{25}$ 4) $\frac{10}{23}$ 5) 28.3, 28, 28, 24-31 or 7 6) 57, 2, -6 7) $\frac{3}{17}$

8) 252 in^2, 66 in, 318 9) 84 in^2, 62 in, 146 10) 7.45 11) 12.2 12) -12.3

13) 54 cm^2, 36 cm, 120 in^2, 60 in 14) 100π cm^2, 20π cm

Week #3

1) $-3\frac{29}{36}$, $10\frac{4}{11}$, $-1\frac{13}{24}$, $4\frac{7}{60}$, $2\frac{32}{49}$, $8\frac{6}{35}$ 2) 28 in, 27 in^2, 730 ft, 12000 ft^2 3) 103 in, 183 in^2, 286

4) <, >, <, =, <, >, <, > 5) 6.7 lbs. 6) 17, 2, 43, 54 7) answers will vary, one option is 1 x 23

8) 49π cm^2, 14π cm

Week #4

1) <, >, <, <, >, <, >, > 2) Q4, y-axis, Q2, y-axis, Q3, Q2, Q3, x-axis 3) -46, 58, 92, 140

4) 41.03 cm 5) $\frac{4}{11}$, $\frac{5}{11}$, $\frac{5}{11}$ 6) $-3\frac{1}{12}$, $-13\frac{3}{7}$, $5\frac{7}{9}$, 36, $\frac{1}{2}$, $14\frac{6}{7}$ 7) 750 in^2, 150 in

8) 36π m^2, 12π m

Week #5

1) $4\frac{5}{21}$ lbs 2) 60 m^2, 25 m 3) 4, 3, 2 4) $\frac{2}{3}$, $\frac{4}{11}$, $9\frac{1}{4}$ 5) $2^4 \cdot 5$, $2^2 \cdot 3$, $3^2 \cdot 5$ 6) -85, -1, 29

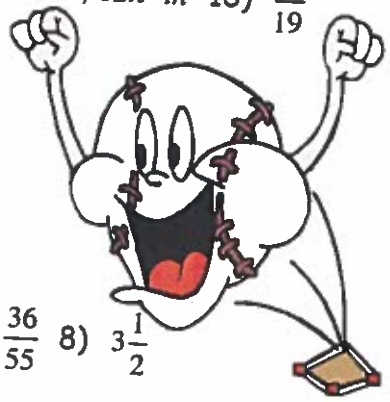
7) 33, -18, 79 8) Q4, Q3, Q1, Q1, Q3, Q2, Q3, y-axis 9) 16π m^2, 8π m, 9π in^2, 6π in

Week #6

1) \$24.94 2) 46 cm^2, 32 cm 3) 30, 120, 72 4) $-1\frac{19}{21}$, $16\frac{16}{45}$, $-1\frac{1}{3}$ 5) 150, 242, 63

6) 31, 88, 3 7) -1, -12, 20 8) 2.5, 1, 1-9 or 8, 3.5 9) 9π m^2, 6π m, 36π in^2, 12π in 10) $\frac{18}{19}$

11) $\frac{2}{5}$ 12) $1\frac{1}{4}$



Week #7

1) $1\frac{1}{20}$ 2) $-\frac{1}{28}$ 3) $-3\frac{21}{40}$ 4) 63, 45, 26, 12 5) 5, 12, 10, 30 6) 1 7) $\frac{36}{55}$ 8) $3\frac{1}{2}$

9) -23, 24, 0, 154 10) 49.5 in^3 11) \$11.40 12) b 13) 38 in, 80 in^2

14) Q4, Q3, Q1, Q1, Q3, Q2, Q3, Q2 15) <, <, >, <

Week #8

1) Q4, Q3, y-axis, Q1, Q3, Q2, Q3, x-axis 2) $-1\frac{1}{12}$, $7\frac{1}{4}$, $-5\frac{5}{9}$ 3) >, >, =, =, <, =, <, <

4) $\frac{1}{6}$, $\frac{1}{3}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{2}{3}$, $\frac{1}{3}$, $\frac{1}{6}$, 0, 1, $\frac{5}{6}$, 1, $\frac{1}{2}$, $\frac{1}{2}$ 5) 21, 67, 133, 77 6) 81π in^2 7) 18π in

Week #9

1) 14, 43, 108, -30 2) 24, 45, 30 3) 192 m^2, 72 m 4) 5, 2, 16 5) 11.2, 12, 12 and 13, 6-13 or 7

6) 78 cm^3 7) 180 cm^3 8) $1\frac{11}{42}$ 9) $\frac{47}{60}$ 10) $-\frac{1}{72}$ 11) Q4, Q3, Q1, Q1, Q3, Q2, Q3, x-axis

Answer Key

13 What's Not to Like?

Simplify each expression by combining like terms. Circle the expression in each problem that does not belong. Place the letter above the problem number below.

1. A. $5t + 3r + 9t - 10r$ $14t - 7r$	E. $r + t - 8r + 13t$ $-7r + 14t$	I. $-4t + 10t + 8r$ $7r + 14t$
2. D. $12x - 3y + x + 2y$ $13x - y$	E. $3(4x - 3y) + x + 3y$ $13x - 6y$	F. $4(4x - 2y) - 3x + 7y$ $13x - y$
3. E. $4(y - 7x) - y$ $3y - 28x$	I. $30x - (-2x)$ $28x$	O. $-7(4x + y) + 7y$ $-28x$
4. U. $6(x - y) - 3(3x + y)$ $-3x - 9y$	V. $3(3x - y) - 6y$ $9x - 9y$	W. $4x + y - 7x - 10y$ $-3x - 9y$
5. Q. $3(r - 1) - 4r + 5$ $-r + 2$	X. $2(3 - 2r) - 4(2 - r)$ 2	Z. $-r + 7 + 3r - 9 - 2r$ -2
6. L. $8(x + y) + 3(x + y)$ $11x + 11y$	M. $10(x + y) + x + y$ $11x + 11y$	N. $9(x + y) - 2(x + y)$ $7x + 7y$
7. A. $3(2b - a) - (2a - b)$ $7b - 5a$	B. $3(a + 2b) - (b + 2a)$ $a + 5b$	C. $2(a + 2b) - (a - b)$ $a + 5b$
8. I. $5(a - b) - 2(a - b) + 8(a - b)$ $a - b$	U. $6(a - b) - 4(a - b) + (a - b)$ $3a - 3b$	O. $(a - b) - (a - b) + (a - b)$ $a - b$
9. R. $3(x - y) - 2(y - x)$ $5x - 5y$	S. $2(x - y) + 3(y - x)$ $5x - 5y$	T. $3(-x) + 2(x - y)$ $-5x + 5y$
10. L. $-4(x + 2(5y - x))$ $4x - 40xy$	M. $-4(x + 5(3xy + x))$ $-24x + 60xy$	N. $-2(3x + 3(-10xy + 3x))$ $-24x + 60xy$

Two expressions in each problem are

E	Q	U	I	V	A	L	E	N	T
2	5	8	1	4	7	10	3	6	9

14 Solving Equations With Addition and Subtraction

$16 + x = -14$
$16 + -16 + x = -14 + -16$
$x = -30$

1. $x + 7 = 13$	$x = -20$	11. $16 = z - 10$	$z = 26$
2. $x + 7 = 4$	$x = -3$	12. $y + 73 = 0$	$y = -73$
3. $-14 + y = -17$	$y = -3$	13. $-100 = b + (-72)$	$b = -28$
4. $y - 11 = 14$	$y = 25$	14. $w - 5 = (8 - 13)$	$w = 0$
5. $y - 5 = -7$	$y = -2$	15. $x + 2.5 = -4.7$	$x = -7.2$
6. $-20 + x = 80$	$x = -60$	16. $a + 3.6 = 0.2$	$a = -3.8$
7. $6 + x = 29$	$x = 23$	17. $x - 6\frac{1}{4} = 12\frac{1}{2}$	$x = 18\frac{3}{4}$
8. $a + 32 = 4$	$a = -36$	18. $2\frac{1}{5} + x = -3\frac{1}{2}$	$x = -5\frac{7}{10}$
9. $-2 = x - 2$	$x = 0$	19. $n + \frac{1}{2} = \frac{3}{4}$	$n = \frac{1}{4}$
10. $-19 + y = 42$	$y = 61$	20. $b - 1\frac{1}{3} = -3\frac{5}{6}$	$b = -2\frac{1}{2}$

15 Solving Equations With Multiplication and Division

$2x = 12$
$\frac{2x}{2} = \frac{12}{2}$
$x = 6$

$-\frac{3}{4}y = 15$
$-\frac{4}{3} \cdot -\frac{3}{4}y = 15 \cdot -\frac{4}{3}$
$y = -20$

1. $3x = -21$	$x = -7$	11. $\frac{3x}{4} = -24$	$x = -32$
2. $7y = 28$	$y = -4$	12. $-\frac{x}{3} = \frac{4}{9}$	$x = -1\frac{1}{3}$
3. $-28 = 196x$	$x = \frac{1}{7}$	13. $-\frac{3}{7} = \frac{a}{14}$	$a = -6$
4. $15a = -45$	$a = 3$	14. $3a = -\frac{1}{4}$	$a = -\frac{1}{12}$
5. $-x = 17$	$x = -17$	15. $\frac{a}{24} = 0.26$	$a = 0.624$
6. $21 = -2x$	$x = -10\frac{1}{2}$	16. $-\frac{1}{99}y = 0$	$y = 0$
7. $-12b = 288$	$b = -24$	17. $-1.5x = 6$	$x = -4$
8. $12x = -60$	$x = -5$	18. $12.5 = 4n$	$n = -3.125$
9. $\frac{a}{5} = -6$	$a = -30$	19. $3.7w = 11.1$	$w = 3$
10. $-\frac{2}{5}y = 14$	$y = -35$	20. $\frac{y}{6} = -\frac{2}{3}$	$y = -4$

16 Solving Basic Combined Equations

$7(x + 2) = -35$
$7x + 14 = -35$
$7x + 14 - 14 = -35 - 14$
$\frac{7x}{7} = \frac{-49}{7}$
$x = -7$

1. $5x - 3 = 22$	$x = 5$	11. $6 - \frac{2}{3}x = 8$	$x = -21$
2. $4a + 3 = -5$	$a = -2$	12. $0.3x - 4.2 = 2.7$	$x = 23$
3. $5 - 7y = 33$	$y = -4$	13. $8.6 = 2.1 - 1.3y$	$y = -5$
4. $5x - 11 = -16$	$x = -1$	14. $5 - 4(y + 1) = -3$	$y = 1$
5. $-3 = 5x + 12$	$x = -3$	15. $-1 = \frac{-y}{4} - 6$	$y = -20$
6. $0 = 0.6x - 3.6$	$x = 6$	16. $\frac{5x}{6} + 34 = 9$	$x = -30$
7. $6 - 8x = 26$	$x = -4$	17. $\frac{-2}{3}d + 3 = 11$	$d = -12$
8. $5 = 5x + 27$	$x = -4\frac{2}{5}$	18. $1.2x + 6 = 1.2$	$x = -6$
9. $3(w + 3) = -15$	$x = -8$	19. $28 = \frac{17}{32}x - 23$	$x = 96$
10. $2(4y + 1) - 5 = 7$	$y = 5$	20. $\frac{2x}{5} + 4 = -12$	$x = -40$