



**"Transform Obstacles
into Opportunities"**

MCCS Middle and High Summer Packet

NAME: _____

Subject: 6th Grade Math

Directions:

- Please complete this packet over the summer.
- It will be collected by your Math teacher during the first day of school, on August 20th, 2018.
- You will be given a GRADE based on the work you complete over the summer.
- All work must be shown to receive credit.
- After reviewing the summer packet in class, a QUIZ will be administered on each of the essential topics.

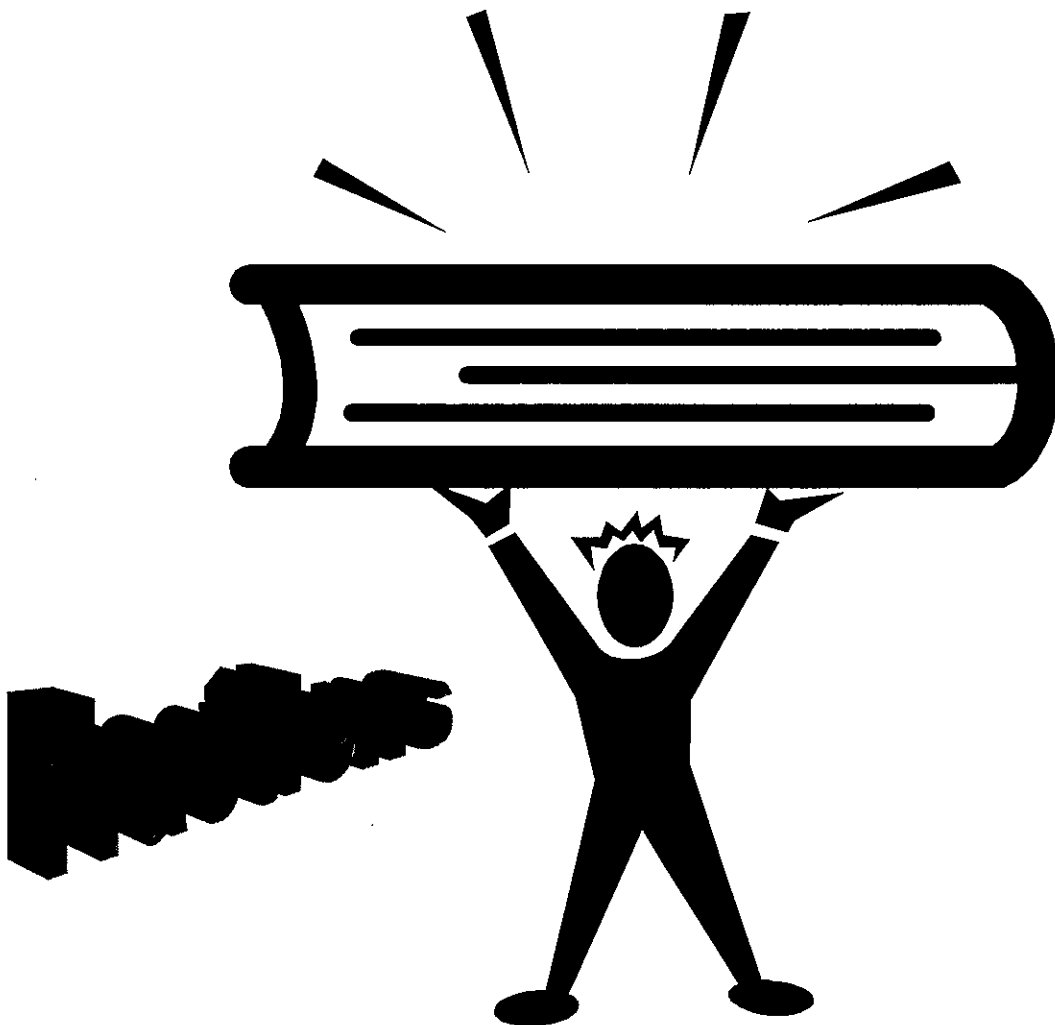
6th Grade Summer Packet

Each week this summer please complete one of the following review sheets. Please show as much work as you can for each problem. This will help if you are asked how you got the answer. Please check your answers with the answer sheet at the back of this packet.

These review sheets will be collected the first week of school and will help prepare you for 6th grade.

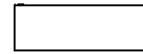
Have a great summer!

Area

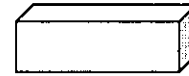


Formula Card:

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



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



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

Ex. 1 If $M = 5$, simplify the following:

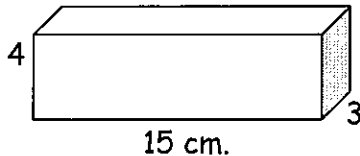
$$M + 7$$

$$5 + 7$$

$$12$$

Ex. 2 Find the volume of the figures:

a)



$$V = l \cdot w \cdot h$$

$$V = 3 \times 15 \times 4$$

$$V = 180 \text{ cm}^3$$

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) Reduce each of the following fractions:

a) $\frac{10}{15} = \frac{\quad}{\quad}$

b) $\frac{8}{12} = \frac{\quad}{\quad}$

c) $\frac{20}{30} = \frac{\quad}{\quad}$

d) $\frac{6}{9} = \frac{\quad}{\quad}$

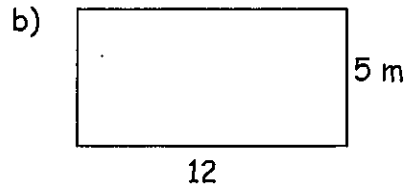
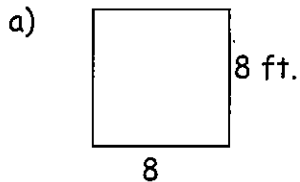
e) $\frac{4}{6} = \frac{\quad}{\quad}$

f) $\frac{12}{14} = \frac{\quad}{\quad}$

g) $\frac{25}{50} = \frac{\quad}{\quad}$

h) $\frac{16}{20} = \frac{\quad}{\quad}$

2) Find the perimeter and area of the figures:



P =

P =

A =

A =



3) Find the greatest common factor (GCF) of the following sets of numbers:

a) 3, 4

b) 5, 10

c) 12, 26

d) 8, 12

4) If $M = 10$, simplify each of the following:

a) $M + 6$

b) $M - 7$

c) $15 - M$

d) $4M$

5) Change the following fractions to mixed numbers:

a) $\frac{24}{7} = \frac{\quad}{\quad}$

b) $\frac{13}{2} = \frac{\quad}{\quad}$

c) $\frac{18}{10} = \frac{\quad}{\quad}$

d) $\frac{7}{5} = \frac{\quad}{\quad}$

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

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



6) Fill in the table with the corresponding fractions, decimals, and percents:

	Fractions	Decimals	Percents
a)	$\frac{1}{2}$.5	50%
b)	$\frac{4}{25}$		%
c)	$\frac{4}{5}$		%
d)	—	.3	%

	Fractions	Decimals	Percents
j)	—	.42	%
k)	—	.56	%
l)	—		68%
m)	—		85%

7) Change the following mixed numbers to improper fractions:

a) $3\frac{1}{8} = \text{—}$

b) $5\frac{4}{7} = \text{—}$

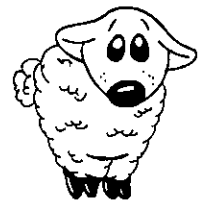
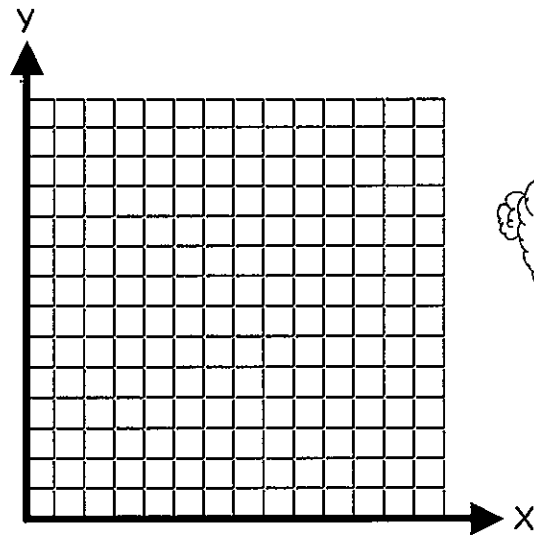
c) $9\frac{1}{11} = \text{—}$

d) $4\frac{2}{7} = \text{—}$

8) Graph each of the points.



X	Y
0	8
1	7
2	6
3	5
4	4
5	3
6	2
7	1



9) Maria has three red dresses, 2 white dresses, and one blue dress. What is the probability she will wear a blue dress at her party?



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

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

Name _____



Summer Review - Week

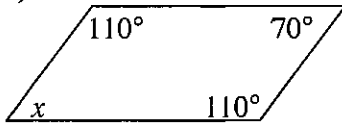
2

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



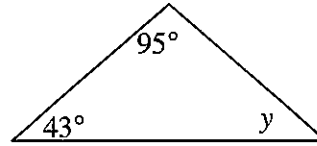
1) Find the missing angles:

a)



x =

b)



y =

2) Find the mean, median, mode, and range of the following set of numbers: 3, 8, 12, 5

mean =

median =

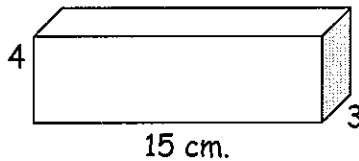
mode =

range =



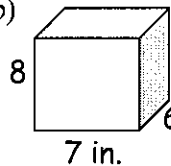
3) Find the volume of the figures:

a)



V = _____

b)



V = _____

4) Reduce each of the following fractions:

a) $\frac{3}{27} = \frac{\quad}{\quad}$

b) $\frac{4}{40} = \frac{\quad}{\quad}$

c) $\frac{5}{60} = \frac{\quad}{\quad}$

d) $\frac{6}{66} = \frac{\quad}{\quad}$

e) $\frac{7}{28} = \frac{\quad}{\quad}$

f) $\frac{8}{10} = \frac{\quad}{\quad}$

g) $\frac{9}{45} = \frac{\quad}{\quad}$

h) $\frac{10}{70} = \frac{\quad}{\quad}$

i) $\frac{9}{36} = \frac{\quad}{\quad}$

j) $\frac{14}{35} = \frac{\quad}{\quad}$

k) $\frac{12}{18} = \frac{\quad}{\quad}$

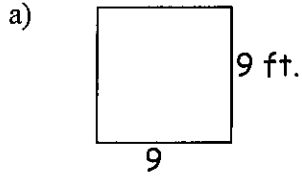
l) $\frac{22}{55} = \frac{\quad}{\quad}$

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



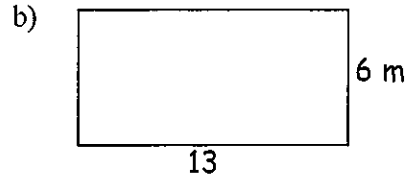
Show your work! Show your work! Show your work!

5) Find the perimeter and area of the figures:



P =

A =



P =

A =



6) Find the greatest common factor (GCF) of the following sets of numbers:

a) 18, 27

b) 36, 40

c) 42, 50

d) 8, 15

7) If $M = 54$, simplify each of the following:

a) $M + 7$

b) $M - 28$

c) $91 - M$

d) $3M$



8) Change the following fractions to mixed numbers:

a) $\frac{23}{8} =$ —

b) $\frac{14}{3} =$ —

c) $\frac{19}{11} =$ —

d) $\frac{8}{7} =$ —

e) $\frac{17}{9} =$ —

f) $\frac{27}{8} =$ —

g) $\frac{35}{3} =$ —

h) $\frac{9}{4} =$ —

9) Find the least common multiple (LCM) of the following sets of numbers:

a) 5, 6

b) 7, 8

c) 12, 15

d) 20, 30

10) Find the mean, median, mode, and range of the following set of numbers: 5, 5, 7, 5, 9, 11, 18

mean =

median =

mode =

range =



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

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

Name _____

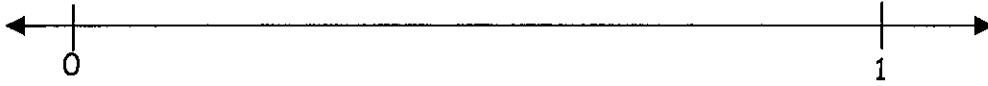


Summer Review - Week #3

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



1) Put the following fractions on the number line where they belong: $\frac{5}{6}$, $\frac{4}{5}$, $\frac{2}{3}$



2) Find the prime factorization of each of the following numbers:

a) 18

b) 24

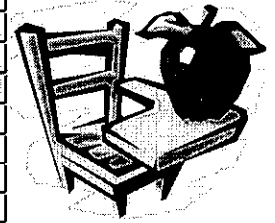
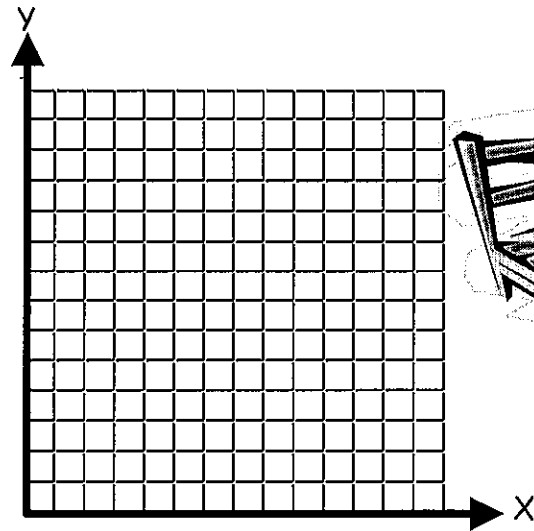
c) 38

d) 81

3) Graph each of the points.



X	Y
0	2
1	3
2	4
3	5
4	6
5	7
6	8
7	9



4) Frank is buying his first car and is stuck on what color it should be. He has to choose between three shades of green, two shades of blue or two shades of purple. What is the probability he will choose a green car?



5) Reduce each of the following fractions:

a) $\frac{14}{49} = \frac{\quad}{\quad}$

b) $\frac{16}{50} = \frac{\quad}{\quad}$

c) $\frac{36}{40} = \frac{\quad}{\quad}$

d) $\frac{20}{25} = \frac{\quad}{\quad}$

e) $\frac{21}{60} = \frac{\quad}{\quad}$

f) $\frac{18}{45} = \frac{\quad}{\quad}$

g) $\frac{24}{54} = \frac{\quad}{\quad}$

h) $\frac{45}{75} = \frac{\quad}{\quad}$

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

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

6) Fill in the table with the corresponding fractions, decimals, and percents:



	Fractions	Decimals	Percents
a)	$\frac{1}{4}$		%
b)	$\frac{7}{20}$		%
c)	$\frac{35}{50}$		%
d)	—	.31	%

	Fractions	Decimals	Percents
j)	—	.88	%
k)	—	.11	%
l)	—		78%
m)	—		22%

7) Change the following mixed numbers to improper fractions:

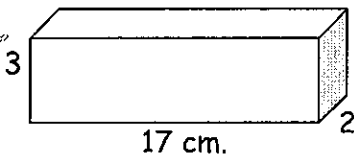
a) $1\frac{2}{5} = \text{—}$

b) $2\frac{3}{10} = \text{—}$

c) $3\frac{5}{12} = \text{—}$

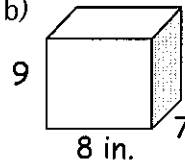
d) $4\frac{3}{11} = \text{—}$

8) Find the volume of the figures:



V = _____

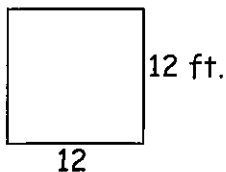
b)



V = _____

9) Find the perimeter and area of the figures:

a)

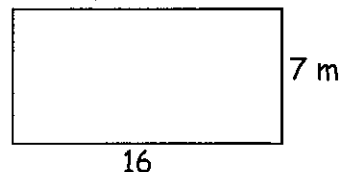


P =

A =



b)



P =

A =



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

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

Name _____



Summer Review - Week # 4



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

1) Change the following fractions to mixed numbers:

a) $\frac{27}{10} =$ _____

b) $\frac{16}{5} =$ _____

c) $\frac{21}{13} =$ _____

d) $\frac{10}{8} =$ _____

2) Find the least common multiple (LCM) of the following sets of numbers:

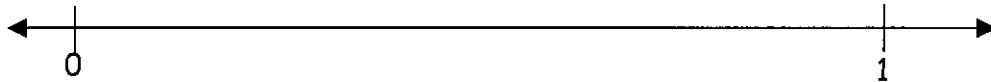
a) 12, 18

b) 6, 8

c) 9, 12

d) 15, 18

3) Put the following fractions on the number line where they belong: $\frac{3}{10}, \frac{4}{9}, \frac{5}{8}$



4) Find the prime factorization of each of the following numbers:

a) 25

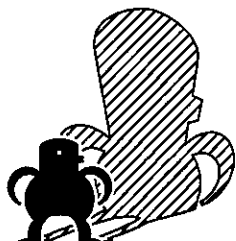
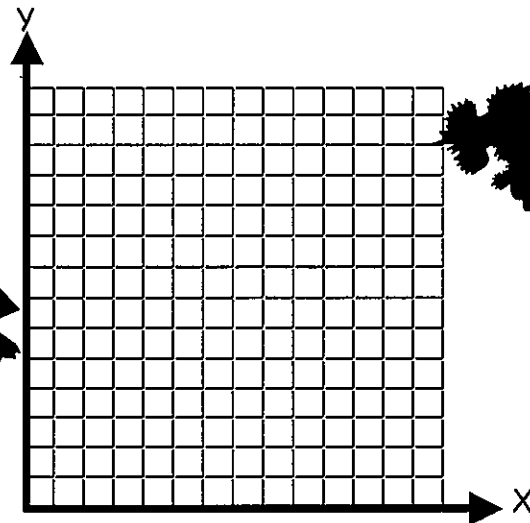
b) 36

c) 49

d) 64

5) Graph each of the points.

X	Y
0	0
1	2
2	4
3	6
4	8
5	10
6	12
7	14



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

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

6) Alina has a six sided dice that she is rolling. What is the probability she will roll a number that is a factor of 6?



7) Find the missing angles:

a)



x =

b)



y =



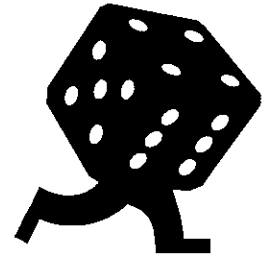
8) Find the mean, median, mode, and range of the following set of numbers: 9, 9, 12, 5, 4, 3, 2

mean =

median =

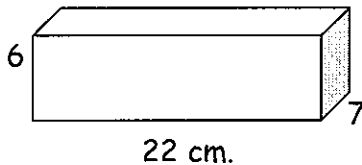
mode =

range =

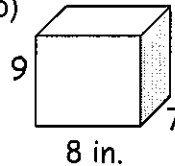


9) Find the volume of the figures:

a)



b)



V = _____

V = _____

10) Reduce each of the following fractions:

a) $\frac{30}{35} = \frac{\quad}{\quad}$

b) $\frac{20}{24} = \frac{\quad}{\quad}$

c) $\frac{32}{64} = \frac{\quad}{\quad}$

d) $\frac{7}{14} = \frac{\quad}{\quad}$

e) $\frac{28}{35} = \frac{\quad}{\quad}$

f) $\frac{40}{48} = \frac{\quad}{\quad}$

g) $\frac{18}{42} = \frac{\quad}{\quad}$

h) $\frac{9}{18} = \frac{\quad}{\quad}$

11) Find the number that corresponds with each of the following prime factorizations:

a) $2^2 \cdot 3$

b) $3^2 \cdot 5$

c) $5^2 \cdot 7$

d) $7^2 \cdot 11$

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



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

Name _____



Summer Review - Week #



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

1) Reduce each of the following fractions:

a) $\frac{39}{42} = \text{---}$

b) $\frac{10}{18} = \text{---}$

c) $\frac{12}{40} = \text{---}$

d) $\frac{14}{56} = \text{---}$

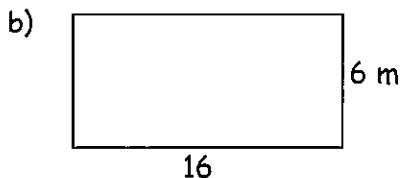
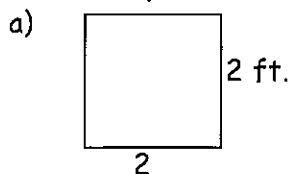
e) $\frac{16}{24} = \text{---}$

f) $\frac{18}{54} = \text{---}$

g) $\frac{20}{75} = \text{---}$

h) $\frac{21}{28} = \text{---}$

2) Find the perimeter and area of the figures:



P =

P =

A =

A =

3) Find the greatest common factor (GCF) of the following sets of numbers:

a) 12, 16

b) 18, 20

c) 35, 42

d) 50, 60



4) If $M = 27$, simplify each of the following:

a) $M + 9$

b) $M - 12$

c) $32 - M$

d) $2M$



5) Change the following fractions to mixed numbers:

a) $\frac{7}{2} = \text{---}$

b) $\frac{8}{3} = \text{---}$

c) $\frac{9}{4} = \text{---}$

d) $\frac{10}{6} = \text{---}$

e) $\frac{11}{7} = \text{---}$

f) $\frac{12}{8} = \text{---}$

g) $\frac{13}{9} = \text{---}$

h) $\frac{14}{10} = \text{---}$

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

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

6) Find the least common multiple (LCM) of the following sets of numbers:

a) 6, 7

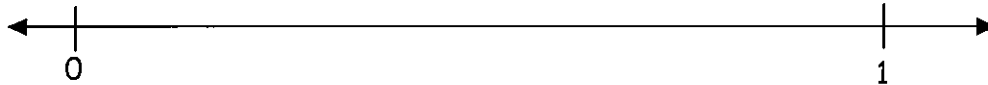
b) 7, 12

c) 8, 16

d) 9, 12



7) Put the following fractions on the number line where they belong: $\frac{3}{5}$, $\frac{1}{8}$, $\frac{2}{7}$



8) Find the prime factorization of each of the following numbers:

a) 35

b) 45

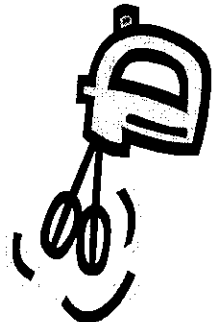
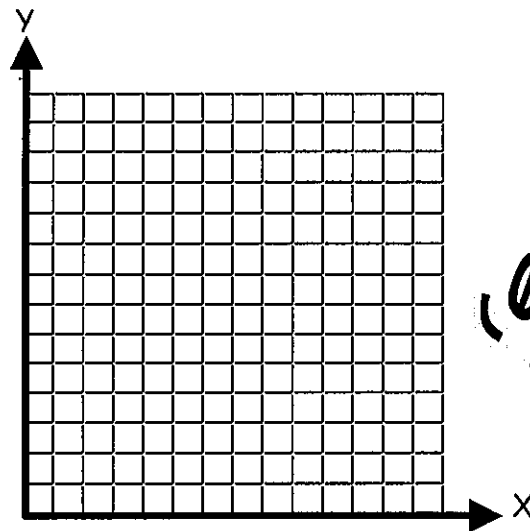
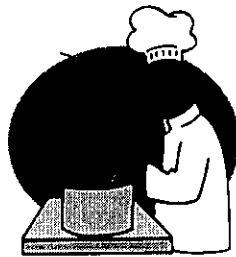
c) 55

d) 65

9) Graph each of the points.



X	Y
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7



10) Adam has decided to paint his house. What is the probability he will paint the South side of the house first?



11) Find the mean, median, mode, and range of the following set of numbers: 5, 7, 4, 9, 4, 1, 16, 17

mean =

median =

mode =

range =

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

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



Name _____

Summer Review - Week # 6

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



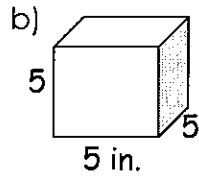
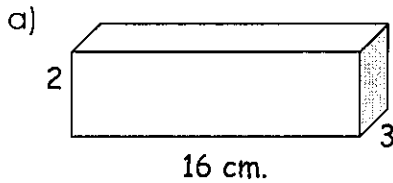
1) Find the mean, median, mode, and range of the following set of numbers: 2, 2, 2, 5

mean = median =

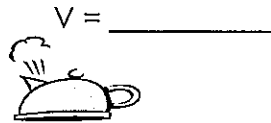
mode = range =



2) Find the volume of the figures:



V = _____



3) Reduce each of the following fractions:

a) $\frac{20}{25} = \frac{\quad}{\quad}$

b) $\frac{21}{28} = \frac{\quad}{\quad}$

c) $\frac{22}{88} = \frac{\quad}{\quad}$

d) $\frac{23}{46} = \frac{\quad}{\quad}$

e) $\frac{24}{30} = \frac{\quad}{\quad}$

f) $\frac{25}{35} = \frac{\quad}{\quad}$

g) $\frac{26}{39} = \frac{\quad}{\quad}$

h) $\frac{27}{36} = \frac{\quad}{\quad}$

i) $\frac{28}{40} = \frac{\quad}{\quad}$

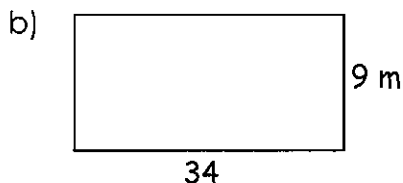
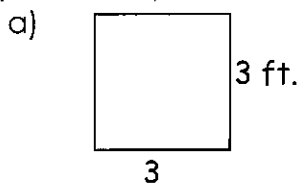
j) $\frac{29}{58} = \frac{\quad}{\quad}$

k) $\frac{30}{48} = \frac{\quad}{\quad}$

l) $\frac{31}{62} = \frac{\quad}{\quad}$



4) Find the perimeter and area of the figures:



P =

P =

A =

A =



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

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

5) Change the following fractions to mixed numbers:



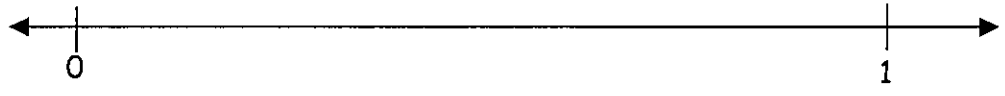
- a) $\frac{29}{3} = \text{---}$ b) $\frac{28}{5} = \text{---}$ c) $\frac{27}{6} = \text{---}$ d) $\frac{26}{5} = \text{---}$
 e) $\frac{24}{5} = \text{---}$ f) $\frac{23}{4} = \text{---}$ g) $\frac{22}{3} = \text{---}$ h) $\frac{21}{2} = \text{---}$



6) Find the least common multiple (LCM) of the following sets of numbers:

- a) 5, 8 b) 6, 9 c) 7, 10 d) 8, 11

7) Put the following fractions on the number line where they belong: $\frac{3}{7}, \frac{2}{7}, \frac{5}{7}$



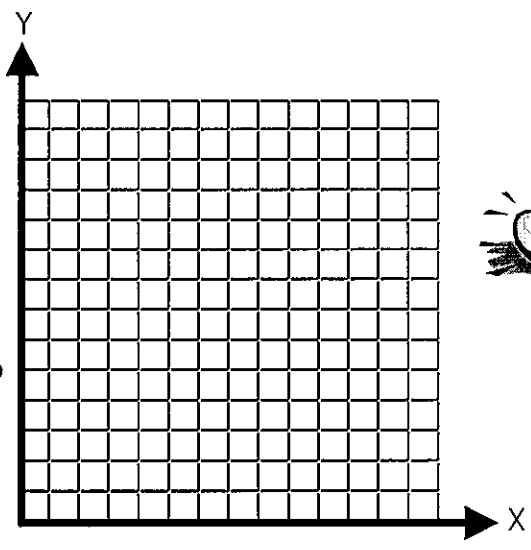
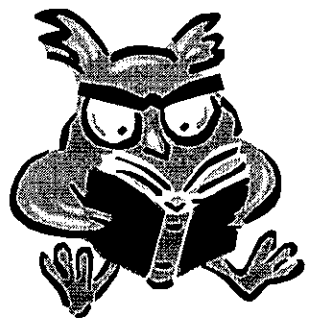
8) Find the number that corresponds with each of the following prime factorizations:

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

9) Graph each of the points.



X	Y
0	3
1	5
2	7
3	5
4	3
5	1
6	3
7	5



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

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



Summer Review - Week # **7**

Name _____

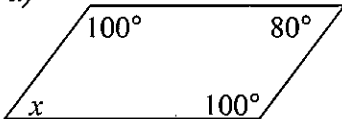


Complete each of the problems below. Please show all of your work.

1) Michael has to mow the lawn next week. What is the probability he will choose a day of the week that is spelled with a t?

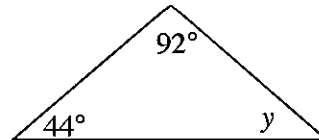
2) Find the missing angles:

a)



$x =$

b)



$y =$

3) Find the mean, median, mode, and range of the following set of numbers: 3, 3, 3, 7, 1, 1, 1, 2, 9

mean =

median =

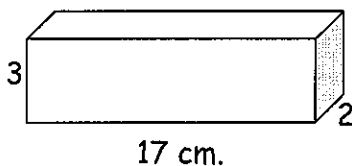
mode =

range =



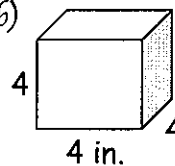
4) Find the volume of the figures:

a)

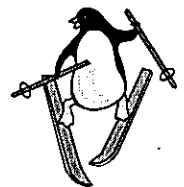


$V =$ _____

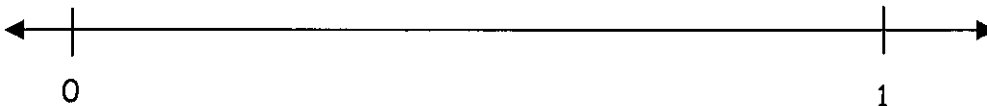
b)



$V =$ _____



5) Put the following fractions on the number line where they belong: $\frac{1}{5}$, $\frac{3}{5}$, $\frac{2}{5}$



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

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



6) Reduce each of the following fractions:

a) $\frac{8}{12} = \text{---}$

b) $\frac{10}{65} = \text{---}$

c) $\frac{16}{36} = \text{---}$

d) $\frac{18}{45} = \text{---}$

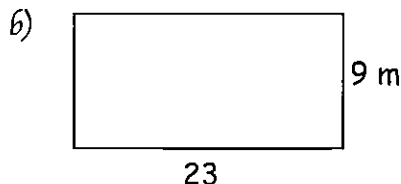
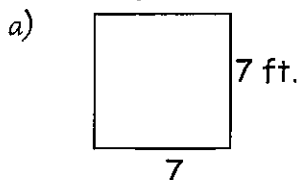
e) $\frac{22}{77} = \text{---}$

f) $\frac{24}{52} = \text{---}$

g) $\frac{26}{34} = \text{---}$

h) $\frac{28}{40} = \text{---}$

7) Find the perimeter and area of the figures:



P =

P =

A =

A =

8) Find the greatest common factor (GCF) of the following sets of numbers:

a) 40, 48

b) 30, 45

c) 32, 48

d) 36, 48

9) If $M = 52$, simplify each of the following:

a) $M + 7$

b) $M - 18$

c) $74 - M$

d) $2M$



10) Change the following fractions to mixed numbers:

a) $\frac{38}{3} = \text{---}$

b) $\frac{39}{4} = \text{---}$

c) $\frac{41}{5} = \text{---}$

d) $\frac{43}{6} = \text{---}$



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

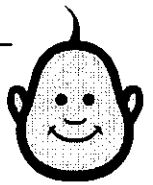


Show your work! Show your work! Show your work!

Name _____

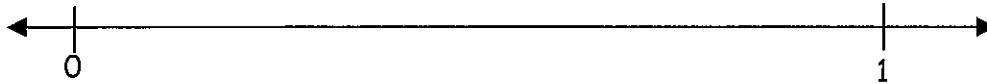


Summer Review - Week # 8



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

1) Put the following fractions on the number line where they belong: $\frac{10}{11}$, $\frac{7}{11}$, $\frac{1}{11}$



2) Find the prime factorization of each of the following numbers:

a) 16

b) 18

c) 20

d) 21

e) 22

f) 26

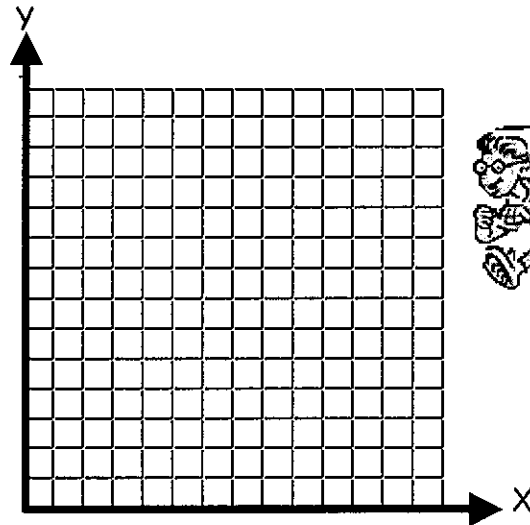
g) 28

h) 32

3) Graph each of the points.

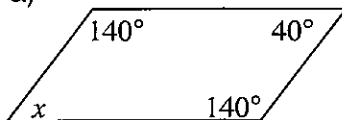


X	Y
0	4
1	5
2	6
3	7
4	8
5	7
6	1
7	2



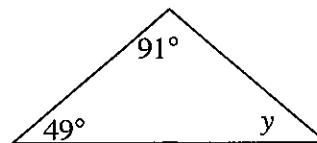
4) Find the missing angles:

a)



x =

b)



y =



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

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

5) Find the greatest common factor (GCF) of the following sets of numbers:

- a) 50, 54 b) 64, 72 c) 82, 94 d) 102, 110



6) If $M = 39$, simplify each of the following:

- a) $M + 25$ b) $M - 28$ c) $71 - M$ d) $3M$

7) Change the following fractions to mixed numbers:

- a) $\frac{87}{2} = \text{---}$ b) $\frac{88}{3} = \text{---}$ c) $\frac{89}{4} = \text{---}$ d) $\frac{90}{7} = \text{---}$



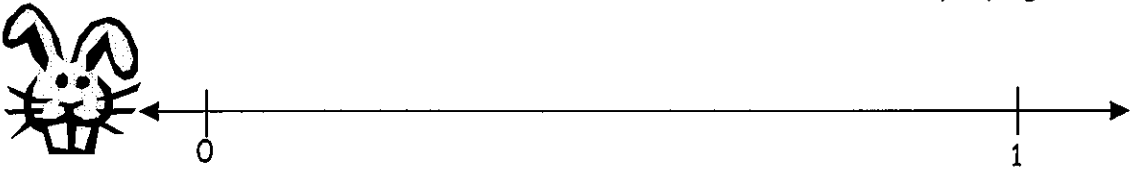
- e) $\frac{91}{8} = \text{---}$ f) $\frac{92}{9} = \text{---}$ g) $\frac{93}{10} = \text{---}$ h) $\frac{94}{11} = \text{---}$

8) Find the least common multiple (LCM) of the following sets of numbers:

- a) 7, 12 b) 2, 9 c) 4, 8 d) 6, 14



9) Put the following fractions on the number line where they belong: $\frac{3}{4}, \frac{1}{4}, \frac{2}{5}$



10) Find the number that corresponds with each of the following prime factorizations:

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

11) Ivan can either wear jeans, pants, or shorts to school. What is the probability he chooses either shorts or jeans?



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



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



Summer Review - Week

Name _____



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

1) Fill in the table with the corresponding fractions, decimals, and percents:

	Fractions	Decimals	Percents
a)	$\frac{3}{4}$		%
b)	$\frac{7}{25}$		%
c)	$\frac{1}{10}$		%
d)	—	.24	%

	Fractions	Decimals	Percents
j)	—	.12	%
k)	—	.99	%
l)	—		90%
m)	—		14%

2) Change the following mixed numbers to improper fractions:

a) $4\frac{2}{3} = \text{—}$

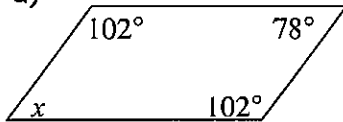
b) $6\frac{3}{4} = \text{—}$

c) $7\frac{4}{5} = \text{—}$

d) $8\frac{5}{6} = \text{—}$

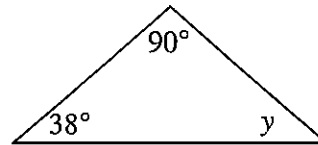
3) Find the missing angles:

a)



x =

b)



y =



4) Change the following fractions to mixed numbers:

a) $\frac{31}{2} = \text{—}$

b) $\frac{32}{3} = \text{—}$

c) $\frac{33}{4} = \text{—}$

d) $\frac{34}{5} = \text{—}$

e) $\frac{35}{6} = \text{—}$

f) $\frac{36}{7} = \text{—}$

g) $\frac{37}{8} = \text{—}$

h) $\frac{38}{9} = \text{—}$

5) If $M = 79$, simplify each of the following:

a) $M + 34$

b) $M - 58$

c) $132 - M$

d) $2M$

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

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

6) Reduce each of the following fractions:

a) $\frac{60}{65} = \frac{\quad}{\quad}$

b) $\frac{20}{55} = \frac{\quad}{\quad}$

c) $\frac{75}{100} = \frac{\quad}{\quad}$

d) $\frac{35}{100} = \frac{\quad}{\quad}$

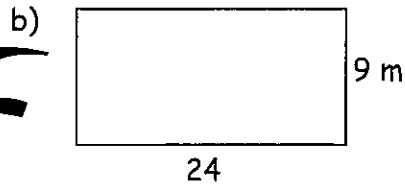
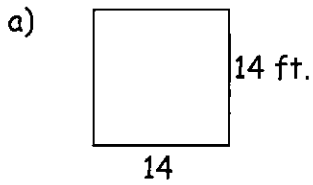
e) $\frac{40}{100} = \frac{\quad}{\quad}$

f) $\frac{15}{100} = \frac{\quad}{\quad}$

g) $\frac{1000}{2000} = \frac{\quad}{\quad}$

h) $\frac{30}{54} = \frac{\quad}{\quad}$

7) Find the perimeter and area of the figures:



P =

P =

A =

A =



8) Find the greatest common factor (GCF) of the following sets of numbers:

a) 72, 82

b) 34, 51

c) 42, 63

d) 46, 92

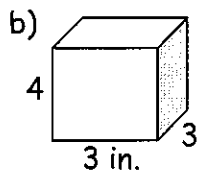
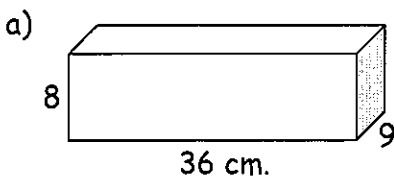
e) 15, 90

f) 28, 42

g) 9, 12

h) 15, 21

9) Find the volume of the figures:



V = _____

V = _____



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