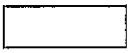
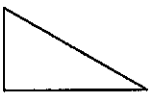
Formula Card:

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

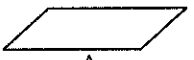
Rectangle - $A = l \cdot w$ $P = l + l + w + w$



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

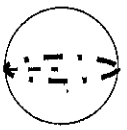


Parallelogram - $A = b \cdot h$ $P = sum\ of\ all\ of\ the\ sides$

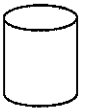


Cone - $V = \frac{1}{3} \pi \cdot r^2 \cdot h$

Sphere - $V = \frac{2}{3} \pi \cdot r^2 \cdot h$



Cylinder - $V = \pi \bullet r^2 \bullet h$



Graphing: Remember to graph the x (horizontal) and then the y (vertical). (x, y)

Absolute Value: distance away from zero (always positive)

Example 1: $|10 - 7| = |3| = 3$ Example 2: $|-3 + -5| = |-8| = 8$ Example 3: $|-8 - 2| = |-6| = 6$

Measures of Central Tendency

- **Mean:** average; $\frac{\text{sum of all numbers}}{\text{total numbers in list}}$
- **Median:** middle number in list of numbers going from least to greatest
- **Mode:** number that appears most often in a list of numbers
- **Range:** difference between largest number and smallest number

Example: 5, 10, 2, 6, 2, 2

Mean: $\frac{5+10+2+6+2+2}{6} = \frac{27}{6} = 4.5$ Mode: 2

Median: 2, 2, (2, 5), 6, 10

$\frac{2+5}{7} = \frac{7}{2} = 3.5$ Range: 10-2 = 8

Multiplying Fractions

1. Reduce fractions, if possible.
2. Multiply across.
3. Check that your answer is in lowest terms.

Example: 1. $\frac{5}{10} \cdot \frac{3}{8}$

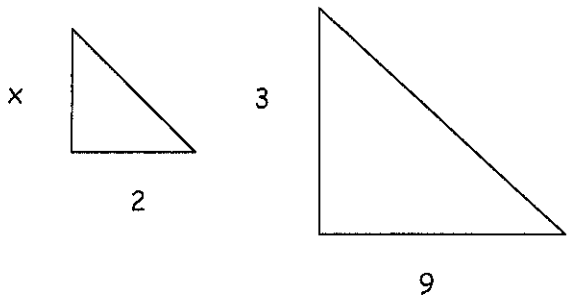
2. $\frac{1}{2} \cdot \frac{3}{8}$

3. $\frac{3}{16}$

Order of Operations

1. Parentheses
2. Exponents: $4^3 = 4 \cdot 4 \cdot 4$
3. Multiplication or Division (left to right)
4. Addition or Subtraction (left to right)

Ratios & Proportions



$\frac{2}{9} = \frac{x}{3}$

$9 \cdot ? = 3$

$3 \div 9 = \frac{1}{3}$

$2 \cdot ? = x$

$2 \cdot \frac{1}{3} = \frac{2}{3}$

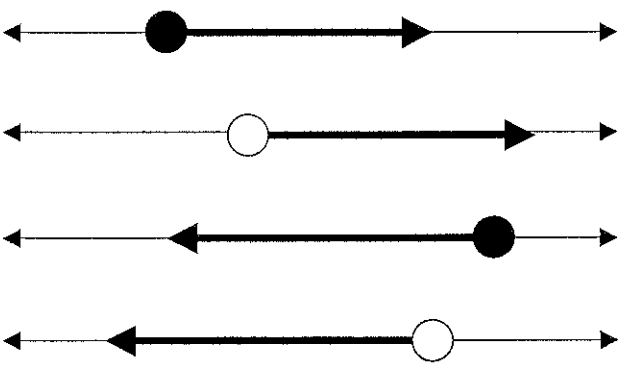
Inequalities

≥ greater than or equal to (at least)

> greater than

≤ less than or equal to (at most)

< less than



Adding Fractions

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

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

$=\frac{22}{15}$

Evaluating Area with Pi

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

$A=\pi \cdot 5^2$

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

Evaluating Expressions/Equations

Ex. 3) Solve for y if x = 4:

y = 2x + 5
y = 2(4) + 5
y = 8 + 5
y = 13

Ex. 4) Solve for x if y = 7:

y = 3x - 6
7 = 3x - 6
+6 +6
13 = 3x
$\frac{13}{3}=\frac{3x}{3}$
$\frac{13}{3}=x$

Symbolic Method

One Step Equations:

Example 1: x + 5 = 12
-5 -5
x = 7

Example 2: x - 8 = 6
+ 8 +8
x = 14

Example 3: $\frac{5x}{5}=\frac{-20}{5}$
x = -4

Two Step Equations:

1. Get "x" by itself by adding or subtracting from each side.
2. Divide both sides by the coefficient (number next to "x").

Example 1: 2x + 7 = 5
-7 -7
$\frac{2x}{2}=\frac{-2}{2}$
x = 2

Example 2: -5x + 10 = -20
-10 -10
$\frac{-5x}{-5}=\frac{-30}{-5}$
x = 6

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Name _____

Summer Review - Week #1

1) Solve for x if y = -10:

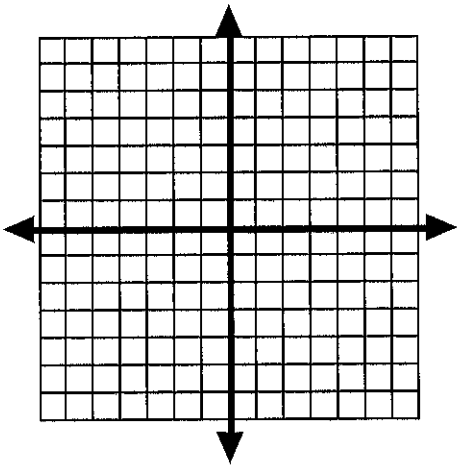
a) $y = x + 12$ b) $y = 7x - 42$ c) $y = 4x - 16$ d) $y = -2x - 45$

2) Solve for y if x = 5:

a) $y = x + 13$ b) $y = 6x - 32$ c) $y = 2x - 15$ d) $y = 8x - 5$

3) Graph each coordinate pair on the graph and then indicate which quadrant or axis the point lies on.

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



4) Simplify: (Don't forget, absolute value is the distance from zero.)

a) $|-24-11|$ b) $|31-60|$ c) $|-37-49|$ d) $|-96+75|$

5) Solve for x:

a) $\frac{7}{6}=\frac{x}{36}$ b) $\frac{10}{8}=\frac{4}{x}$ c) $\frac{x}{60}=\frac{9}{10}$

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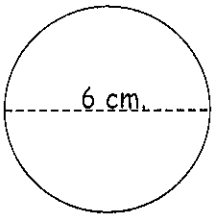
Name _____

Summer Review - Week #2

1) Find the circumference and area of each circle:

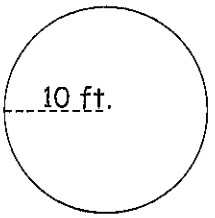
a)



C = _____ or _____

A = _____ or _____

b)



C = _____ or _____

A = _____ or _____

2) Solve for x if y = 7:

a) $y = x + 24$ b) $y = -2x - 26$ c) $y = -3x - 11$ d) $y = 6x - 1$

3) Solve for y if x = -1:

a) $y = x + 12$ b) $y = 6x - 31$ c) $y = 2x - 14$ d) $y = 4x - 15$

4) Try to reduce before you compute the answers! (This will help when you are trying to reduce.)

a) $\frac{12}{30} \cdot \frac{9}{12} =$ b) $\frac{25}{24} \cdot \frac{8}{10} =$ c) $\frac{72}{72} \cdot \frac{72}{72} =$ d) $\frac{20}{12} \cdot \frac{16}{30} =$

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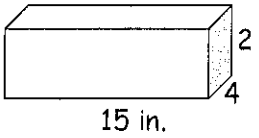
Name _____

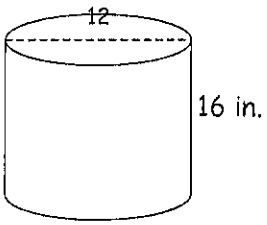
Summer Review - Week #3

1) Find the surface area and volume of each of the figures.

a) 

Surface Area =

Volume =

b) 

Surface Area =

Volume =

2) Solve for x if y = -3:

a) $y = x + 17$ b) $y = 4x - 43$ c) $y = -3x - 19$ d) $y = -2x - 46$

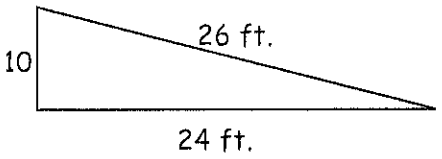
3) Solve for y if x = 12:

a) $y = 3x + 14$ b) $y = 2x - 12$ c) $y = -2x - 91$ d) $y = -7x - 24$

4) Find the area and perimeter of the following figures.

a) A = P =

b) A = P =



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

5) Simplify:

a) $-\frac{4}{15}-\frac{3}{5}=$ b) $\frac{3}{16}-\frac{7}{32}=$ c) $\frac{9}{7}-\frac{11}{6}=$ d) $\frac{7}{9}-\frac{4}{4}=$

6) Solve for x if y = 0:

a) y = x + 24 b) y = 6x - 90 c) y = 2x - 22 d) y = 4x - 36

7) Solve for y if x = -8:

a) y = -2x + 3 b) y = 3x - 39 c) y = -4x - 35 d) y = 5x - 12

8) Simplify: (Don't forget, absolute value is the distance from zero.)

a) $|-26-12|$ b) $|81-67|$ c) $|-39-41|$ d) $|-95+92|$

9) Solve for x:

a) $\frac{9}{12}=\frac{x}{36}$ b) $\frac{7}{8}=\frac{4}{x}$ c) $\frac{x}{30}=\frac{4}{5}$

10) Write an equation that represents the points in the table.

x	y
3	4
5	6
7	8

y = _____

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Summer Review - Week # IV

Name _____

1) Solve for x if y = -3:

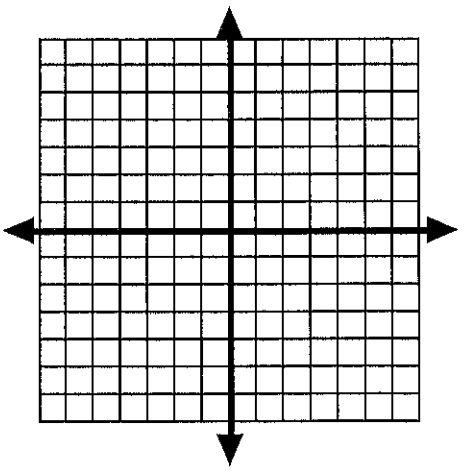
a) $y = 4x + 42$ b) $y = -2x - 4$ c) $y = 7x - 1$ d) $y = 40x - 8$

2) Solve for y if x = 1:

a) $y = -x + 3$ b) $y = -6x - 2$ c) $y = -2x - 5$ d) $y = -4x - 26$

3) Graph each coordinate pair on the graph and then indicate which quadrant or axis the point lies on.

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



4) Simplify: (Don't forget, absolute value is the distance from zero.)

a) $|-21-17|$ b) $|39-26|$ c) $|-17-79|$ d) $|-9+25|$

e) $|-21-61|$ f) $|61-74|$ g) $|-31-79|$ h) $|-12+55|$

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

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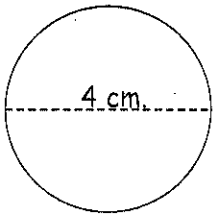
Name _____

Summer Review - Week #5

1) Find the circumference and area of each circle:

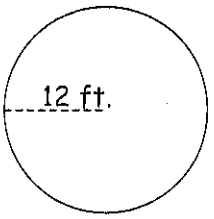
a)



C = _____ or _____

A = _____ or _____

b)



C = _____ or _____

A = _____ or _____

2) Solve for x if y = 7:

a) $y = x + 91$ b) $y = 4x - 2$ c) $y = 5x - 46$ d) $y = 6x - 86$

3) Solve for y if x = 13:

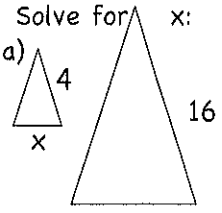
a) $y = -x + 3$ b) $y = -2x - 2$ c) $y = -3x - 75$ d) $y = 8x - 36$

4) Try to reduce before you compute the answers! (This will help when you are trying to reduce.)

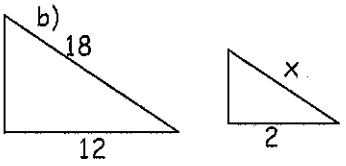
a) $\frac{18}{27} \cdot \frac{30}{40} =$ b) $\frac{10}{15} \cdot \frac{24}{32} =$ c) $\frac{36}{72} \cdot \frac{9}{12} =$ d) $\frac{24}{18} \cdot \frac{18}{24} =$

5) Solve for x:

a)



b)



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Name _____

Summer Review - Week #6

1) Solve for x if y = -30:

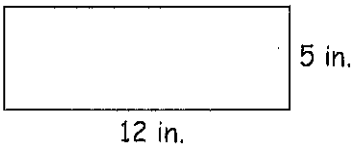
a) y = x + 11 b) y = -2x - 32 c) y = -3x - 1 d) y = 5x - 10

2) Solve for y if x = -6:

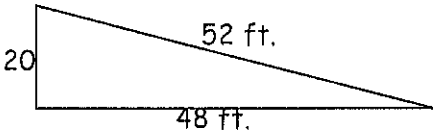
a) y = x + 3 b) y = -2x - 72 c) y = 3x - 65 d) y = 4x - 26

3) Find the area and perimeter of the following figures.

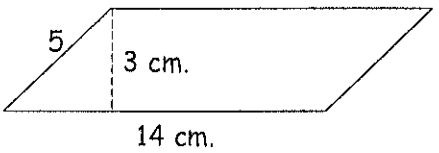
a) A = P =



b) A = P =



c) A = P =



4) Simplify:

a) $-\frac{8}{9}-\frac{4}{6}=$ b) $\frac{4}{5}-\frac{7}{25}=$ c) $\frac{1}{6}-\frac{2}{10}=$ d) $\frac{9}{10}-\frac{1}{2}=$

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5) Solve for y if x = 3:

a) y = -5x + 17 b) y = 3x - 22 c) y = 2x - 25 d) y = 6x - 39

6) Simplify: (Don't forget, absolute value is the distance from zero.)

a) $|-81-17|$ b) $|8-20|$ c) $|-76-29|$ d) $|-91+45|$

7) Solve for x:

a) $\frac{1}{8}=\frac{x}{32}$ b) $\frac{9}{5}=\frac{3}{x}$ c) $\frac{x}{40}=\frac{3}{20}$

8) Write an equation that represents the points in the table.

x	y
-2	4
0	2
5	-3

y = _____

9) Solve for x if y = -5:

a) y = -x + 13 b) y = 2x - 23 c) y = -3x - 17 d) y = 8x - 29

10) Solve for y if x = -8:

a) y = x + 92 b) y = 3x - 72 c) y = -5x - 35 d) y = 7x - 26

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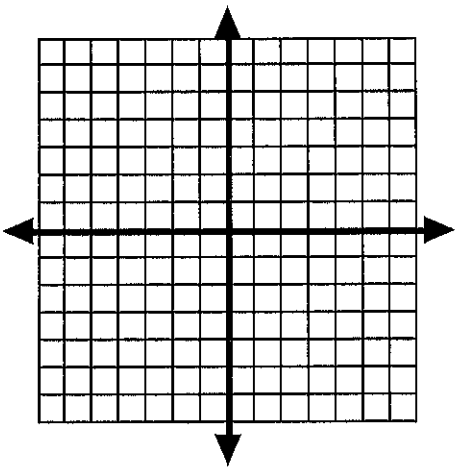
Show your work! Show your work! Show your work!

Name _____

Summer Review - Week #7

1) Graph each coordinate pair on the graph and then indicate which quadrant or axis the point lies on.

Coordinate pair	Quadrant or Axis
(-2, -4)	
(-3, -6)	
(-4, 2)	
(-1, 4)	
(3, 0)	
(1, -1)	
(2, -7)	
(-4, -5)	



2) Simplify: (Don't forget, absolute value is the distance from zero.)

a) $|-29-13|$ b) $|39-62|$ c) $|-59-41|$ d) $|-26+71|$

3) Solve for x:

a) $\frac{7}{8}=\frac{x}{48}$ b) $\frac{9}{2}=\frac{8}{x}$ c) $\frac{x}{80}=\frac{3}{4}$

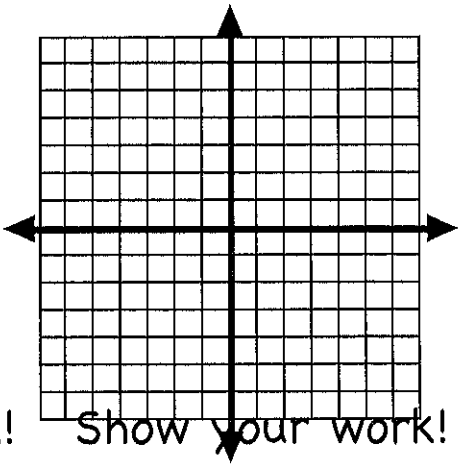
4) Graph the following lines on the coordinate plane:

a) y = x + 5

b) y = -2x + 6

c) $y=\frac{1}{4}x - 2$

d) $y=-\frac{2}{3}x + 3$



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Name _____

Summer Review - Week # 8

1) Solve for x if y = -3:

a) $y = x + 17$ b) $y = 2x - 4$ c) $y = 9x + 24$ d) $y = -2x - 1$

2) Solve for y if x = 7:

a) $y = -3x + 63$ b) $y = 2x - 38$ c) $y = 4x - 25$ d) $y = 10x - 16$

3) Try to reduce before you compute the answers! (This will help when you are trying to reduce.)

a) $\frac{12}{24} \cdot \frac{10}{5} =$ b) $\frac{23}{24} \cdot \frac{14}{46} =$ c) $\frac{3}{4} \cdot \frac{36}{18} =$ d) $\frac{15}{18} \cdot \frac{21}{3} =$

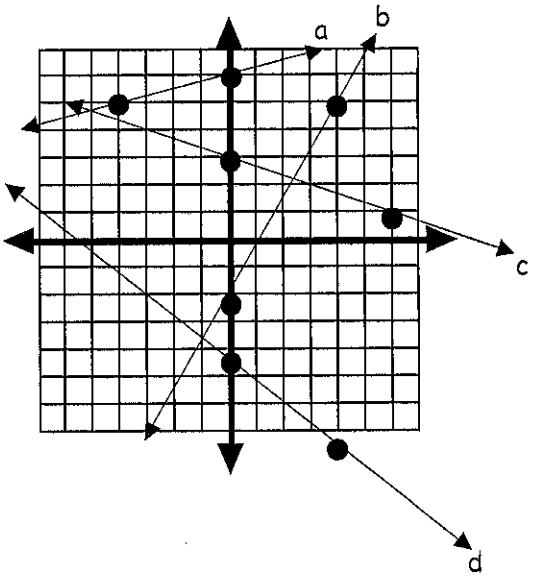
4) Write an equation that represents each of the lines.

a) y =

b) y =

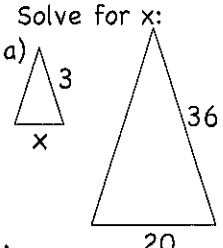
c) y =

d) y =

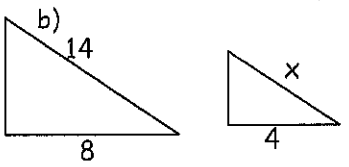


5) Solve for x:

a)



b)



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