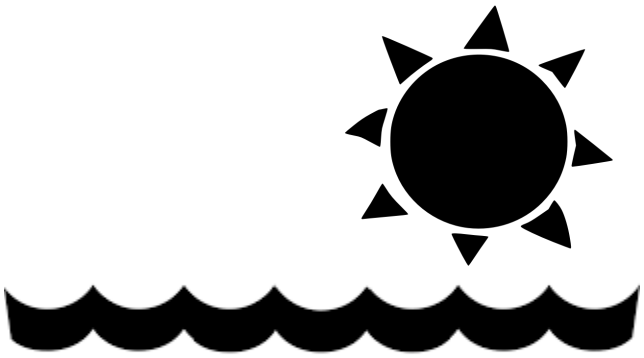
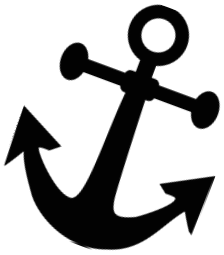


Summer Math Practice

Preparing for:

✻ ✻ Algebra 1 ✻ ✻

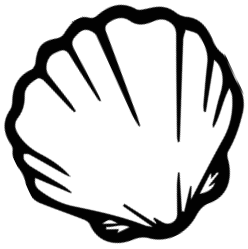
These problems are meant to prepare you to be successful in Algebra 1 next year. The packet is designed so that you can practice a variety of problems each week. It is recommended that you complete only one page of the packet each week so that you are able to keep your brain fresh from now until August! Remember to show all work in the space provided below the problems.



You may email

Mrs. Wallis (kwallis@fwc.org)

for any other summer math needs.



✻ I look forward to working with you in the fall! ✻

Student Name _____

Name _____

Students are expected to know the following:

Multiplication tables for 1-12

x	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

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Perfect Squares and Square Roots (1-12)

$1^2 = 1$	$\sqrt{1} = 1$	$7^2 = 49$	$\sqrt{49} = 7$
$2^2 = 4$	$\sqrt{4} = 2$	$8^2 = 64$	$\sqrt{64} = 8$
$3^2 = 9$	$\sqrt{9} = 3$	$9^2 = 81$	$\sqrt{81} = 9$
$4^2 = 16$	$\sqrt{16} = 4$	$10^2 = 100$	$\sqrt{100} = 10$
$5^2 = 25$	$\sqrt{25} = 5$	$11^2 = 121$	$\sqrt{121} = 11$
$6^2 = 36$	$\sqrt{36} = 6$	$12^2 = 144$	$\sqrt{144} = 12$

Measurement Conversions

1 week = 7 days	**1 mile = 5280 feet**
1 day = 24 hours	**1 foot = 12 inches**
1 hour = 60 minutes	**1 mile = 1760 yards**
1 minute = 60 seconds	**1 yard = 3 feet**
1 gallon = 4 quarts	**1 kilometer = 1000 meters**
1 quart = 2 pints	**1 meter = 100 centimeters**
1 pint = 2 cups	**1 centimeter = 10 millimeters**
1 kilogram = 1000 grams	**1 pound = 16 ounces**
1 liter = 1000 milliliters	**1 dollar = 100 cents**

Vocabulary

Evaluate - to calculate the value of an expression

Simplify - to reduce an expression to its simplest form (fewest number of terms possible)

Solve - to find a value for the variable that makes an equation true

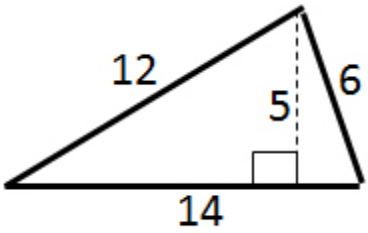
Expression - numbers, symbols, and operations (+, -, ÷, x) grouped together (*can be evaluated/simplified*)

Equation - uses an *equal sign* to show two expressions are equal to the same value (*can be solved*)

Name _____

Preparing for Algebra 1!

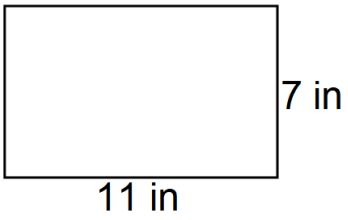
Week 1

Evaluate the following: $2 + \frac{3-9}{3}$	Round to the nearest TENTHS place: $5,423.847$	Evaluate the following: (leave your answer as an improper fraction) $2\frac{2}{3} + \frac{5}{4}$
Solve: $-4x = -8$	Find the area of the triangle:  	Write the following as a PERCENT: $.85$
Jeffrey is playing a carnival game at the state fair. For this game, you pull a string and get whatever prize is on the end. Two strings are attached to grand prizes, eighteen are attached to candy, and thirty are attached to empty boxes with no prizes in them. *What is the probability that Jeffrey will win one of the candy prizes?*	Find the greatest common factor between the two numbers: $24 \; and \; 56$	Solve the proportion: Round to the nearest TENTH. $\frac{8}{25} = \frac{x}{9}$

Name _____

Preparing for Algebra 1!

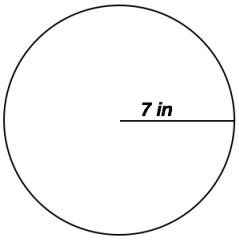
Week 2

Evaluate the following: (Leave your answer as an improper fraction, but remember to *reduce if necessary!*) $\frac{2}{7} \cdot \frac{5}{4}$	Find the area of the rectangle:  	Find the least common multiple between the two numbers: $6 \; and \; 4$
Round to the nearest HUNDREDTHS place: $516,622.6245$	Write the following as a DECIMAL: 2.84%	Evaluate the following: $-7-5$
Round to the nearest TENTH. $What \; is \; 65\% \; of \; 70?$	Solve: $3x - 3 = 15$	Evaluate the following: $2 \cdot 7 + \frac{12}{3}$

Name _____

Preparing for Algebra 1!

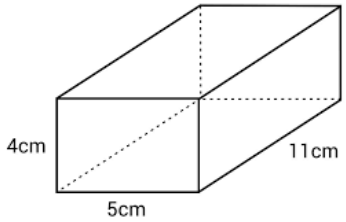
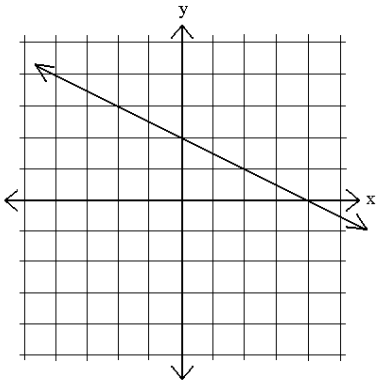
Week 3

Round to the nearest WHOLE number: $3,284.587$	Solve: $20 = 14 - r$	Evaluate the following: (Leave your answer as an improper fraction, but remember to *reduce if necessary!*) $2\frac{2}{5} - \frac{4}{7}$
Write the following as a DECIMAL: $\frac{3}{8}$	Solve the proportion: Round to the nearest TENTH. $\frac{a}{15} = \frac{3}{7}$	Find the area of the circle: 
Solve: $2x + 12 = 30$	Find the slope between the following points: $(2, -7), (-3, 4)$	Simplify the expression: (combine like terms) $2x - 4x + 5 - 7$

Name _____

Preparing for Algebra 1!

Week 4

Find the volume of the rectangular prism:  	Simplify the expression: $5x + 10 - 2x - 4$	Solve: $-3 = \frac{x}{4} - 5$
Find the slope of the line:  	Evaluate the following: (Leave your answer as an improper fraction, but remember to *reduce if necessary!*) $1\frac{2}{5} \div \frac{3}{7}$	Solve: $x + 2 = 3x - 8$
$3 \cdot a = a \cdot 3$ Which of the following properties is represented by the expression above? a. Associative property b. Commutative property c. Identity property d. Zero property	Write an expression to represent the following: *"8 increased by a number"*	Simplify the following: $x^4y^2 \cdot x^3y$

Name _____

Preparing for Algebra 1!

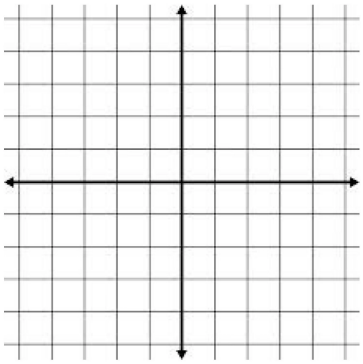
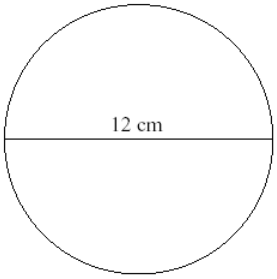
Week 5

Solve: $1 - 4n = -11 - n$	Change the following mixed number into an improper fraction. $3\frac{2}{7}$	Simplify the expression: (*use the distributive property*) $-2(4x - 3)$
Find the distance between the two points. Round to the nearest TENTH. $(2, 4)$ & $(5, 3)$	List all *factors* of 36:	Georgina gets a weekly allowance. This week she spent $4 at the school store. She still has $8 left. *Write an <u>equation</u> to represent that she had some money, spent some money, and has some money left. DO NOT SOLVE.*
Simplify the expression: $-3x - 7 + 2 - 5x$	Round to the nearest TENTH. 45 *is what percent of* 52?	Solve: $3 + 6a = 111$

Name _____

Preparing for Algebra 1!

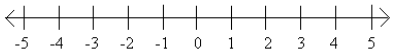
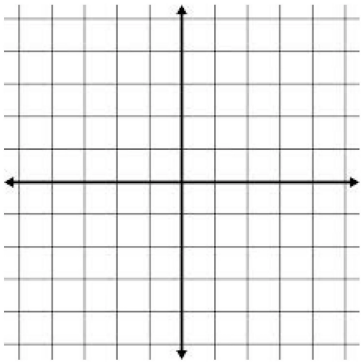
Week 6

Graph the following three points on the coordinate plane: $(0, 4),\ (-2, 2),\ (-3, 0)$ 	Find the area of the circle:  	Evaluate the following: $\frac{6 \cdot 2}{3-1} + 4 \cdot 4$
Solve: $\frac{n}{8} + 9 = 10$	Evaluate the following: (Leave your answer as an improper fraction, but remember to *reduce if necessary!*) $\frac{1}{15} - \frac{3}{10}$	Write the following as a PERCENT: 4.6
Simplify the following: $2a^4 \cdot 3a^5b$	Solve: $-5v + 3v = -4v + 14$	$2 + (4 + c) = (2 + 4) + c$ Which of the following properties is represented by the expression above? e. Associative property f. Commutative property g. Identity property h. Zero property

Name _____

Preparing for Algebra 1!

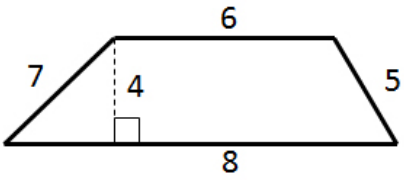
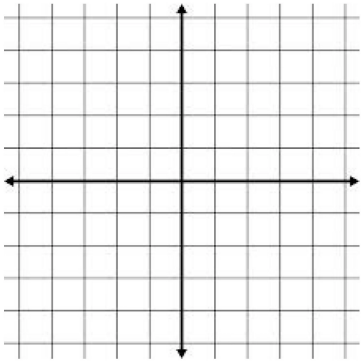
Week 7

Simplify the expression: $-3x-7+2x-4$	Graph the inequality on the number line below. $x \geq -5$  	Solve: $-10 = \frac{x}{2} - 3$
If $a = 2,\ b = -3,\ c = -7$, evaluate the following expression: $b(a+c)^2$	Simplify the expression: $4(5-6x)+7$	Solve the proportion: Round to the nearest TENTH. $\frac{4}{c} = \frac{7}{3}$
Solve: $-6(1-2x) = 2(5x+8)$	Graph the following equation on the coordinate plane: $y = \frac{1}{3}x + 1$ 	Find the slope between the following points: $(-4, 0),\ (5, 3)$

Name _____

Preparing for Algebra 1!

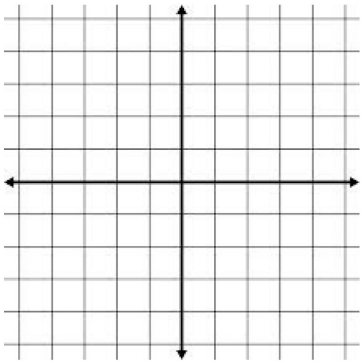
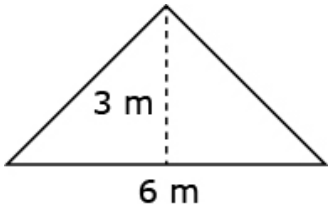
Week 8

Find the area of the trapezoid:  	Solve: $3 = \frac{c+2}{2}$	Graph the following equation on the coordinate plane: $y = \frac{1}{2}x - 2$ 
Write an expression to represent the following: *"the sum of negative six and a number"*	Find the distance between the two points. Round to the nearest TENTH. $(5, -2)$ & $(-1, 0)$	Simplify the expression: $-5 + x - 3 - 7x + 2$
Simplify the expression: $5x + 3 - 7y + x - 2 + 3y$	Write the following as a PERCENT: $\frac{2}{5}$	Solve: $-m + 4(m + 4) = 8m - 9$

Name _____

Preparing for Algebra 1!

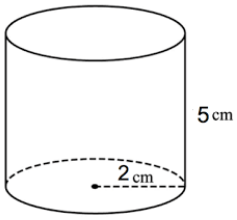
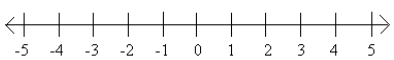
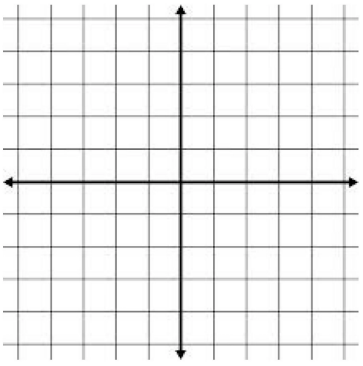
Week 9

Simplify the following: $-4c^0d^2 \cdot 5c^2d$	Solve: $7(n+8) - 2n = -5n + 26$	Graph the following equation on the coordinate plane: $y = -2x - 4$ 
Solve: $1 + 3x = -15 + 7x$	Rebecca won some tokens at the arcade. She had a hole in her pocket, so she ended up losing 5 of the tokens. Even though she lost some of them, she still has some tokens left over. *Write an <u>equation</u> to represent the number of tokens Rebecca has now. Use x to represent the beginning tokens and y to represent the ending tokens.*	Find the area of the triangle: 
Simplify the expression: $6 + 10(x - 7)$	Write the following as a DECIMAL: 5%	List all *factors* of 42:

Name _____

Preparing for Algebra 1!

Week 10

Write an expression to represent the following: *"the product of a number and 3"*	You roll a six-sided die. *What is the probability that you will roll a factor of 4?*	Solve: $-4v + 1 + 7v = 11 + 5v$
Simplify the expression: $-c + 2d - 4 + 5c$	Find the volume of the cylinder:  	Evaluate the following: (Leave your answer as an improper fraction, but remember to *reduce if necessary!*) $\frac{1}{10} \div \frac{3}{15}$
Solve: $-3(x - 3) = 1 - 3x$	Graph the inequality on the number line below. $x < 2$  	Graph the following equation on the coordinate plane: $y = 4x - 3$ 

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