Name _____

Summer Math Assignment

Entrance into Algebra 1
The following topics are essential to know as you enter into Algebra 1. All these concepts should have been mastered by the end of Pre-Algebra.

On the second day of school, (August 28, 2018) you will be given a quiz on the topics below. You will have the entire class period to complete the quiz with NO calculator. This will be your FIRST QUIZ grade of the quarter.

Review these topics over the summer. It is your responsibility to research or seek help for any concepts/topics that have been forgotten.

Integers

All answers should be in lowest terms. Convert any improper fraction to a mixed number.

DO NOT USE A CALCULATOR

https://www.youtube.com/watch?v=x4rtfD-DZMQ
https://www.youtube.com/watch?v=btSPgHxKN4U

1) $(-3) + (-7) =$	2) $(-30) + 9 =$
3) $42 + (-45) =$	4) $15 - (-3) =$
5) $(-14) - (-6) =$	6) $21 - (-12) - 12 =$
7) $(-4) \cdot (-10) =$	8) $164 \div (-4) =$
9) $86 \cdot (-6) =$	10) $(-5) \cdot (-13) \cdot (-4) =$

Order of Operations

Use order of operations to simplify each expression. Leave answers in fraction form if it does not simplify to a whole number.

SHOW YOUR STEPS – DO NOT USE A CALCULATOR

http://www.purplemath.com/modules/orderops.htm

https://www.youtube.com/watch?v=dAgfnK528RA&t=300s

1) $6 + 4 - 2 \cdot 3$	2) $15 \div 3 \cdot 5 - 4$
3) $(12 - 4) - 8$	4) $20 - 7 \cdot 4$
5) $32 \div [12 \div (8 - 2)]$	6) $\frac{5+[49-(8-1)^2]}{11-2^2}$

Evaluate Expressions

Solve the following linear equations. Leave your answers on fraction form if it does not simplify to a whole number.

SHOW YOUR STEPS – DO NOT USE A CALCULATOR

https://www.youtube.com/watch?v=fZDWcU0i0o4

Evaluate questions 1 and 2 when $x = 5$, $y = -4$, and $z = 6$

1) $3x^2 + y$	2) $xy + z$

Evaluate questions 3 - 6 when x = -2 , y = 3 and z = -7	
3) $2y^2 + 3$	4) $\frac{xy}{2}$
5) $2x(y + z)$	6) $x^2 + y^2 + z^2$

Fractions/Decimals/Percents

SHOW YOUR STEPS – DO NOT USE A CALCULATOR

https://www.youtube.com/watch?v=HxEQxS0QSwg

1) Write 82% as a fraction and a decimal	2) Find 25% of 80
3) 14 is what % of 90?	4) Write 135% as a decimal and a fraction (mixed number and a reduced improper fraction)

Solving Equations through Inverse Operations

Find the value for the variable in the following equations. Reduce the fractions.

SHOW YOUR INVERSE OPERATION STEPS – DO NOT USE A CALCULATOR

1) $9p = -3$	2) $w - 4 = 10$
3) $2x + 11 = 9$	4) $\frac{x}{7} - 4 = 2$
5) $5y + 3 = 12$	6) $-2x + 5 = 13$

Data/ Measures of Central Tendency

Calculate the mean, median, mode and range for the following sets of data

SHOW YOUR STEPS – DO NOT USE A CALCULATOR

https://www.youtube.com/watch?v=B1HEzNTGeZ4

1) 30, 38, 42, 38, 17 Mean = _____ Median = _____ Mode = _____ Range = _____	2) 518, 581, 508, 588, 580 Mean = _____ Median = _____ Mode = _____ Range = _____

Word Problems

Solve the word problems for the information it is asking.

SHOW YOUR STEPS – DO NOT USE A CALCULATOR

1) Stephen went to the mall and spent $41. He bought several t-shirts that each cost $12 and he bought a pair of socks for $5. How many t-shirts did Stephen buy?

2) Three –fourths of the student body attended the football game on Friday night. If there are 1232 students in the school, how many attended the football game?

3) The school lunch prices are changing next year at William Jefferson Middle School. If next year's price for a lunch is $4.60, what did a lunch cost this year?

4) Jessica drove 3 hours more than Victoria on their trip to Texas. If the trip took 37 hours, how long did Jessica and Victoria each drive?

Fraction Computation

All answers should be in lowest terms. Convert any improper fraction to a mixed number.

SHOW YOUR STEPS – DO NOT USE A CALCULATOR

1) $\frac{7}{16} + \left(-\frac{3}{8}\right)$

2) $\frac{7}{8} - \left(-\frac{3}{16}\right)$

3) $(-\frac{1}{3})(-7\frac{1}{2})$	4) $2\frac{1}{4} \div \frac{1}{2}$

Combining Like Terms

Simplify the following expressions

SHOW YOUR STEPS – DO NOT USE A CALCULATOR

https://www.youtube.com/watch?v=US95J1g6iY4

https://www.youtube.com/watch?v=lVX0cFHPapc

1) $37z + 4z$	2) $25b - 16b$
3) $(-9c) + (-5c)$	4) $4f + 8 + 5f - 6$
5) $4r - 2y + 6y + 3r$	6) $2m + 3n - 4m + 5n$

Graphing on the Coordinate Plane

Graph the following coordinates on the coordinate plane and label the points with the proper letter.

A (3, 4) B (4, 0) C (-4, 2) D (-3, -2) E (0, 7) F (-5, 6)