Ponaganset Middle School
Incoming 8th Grade Summer Math Work

This summer's incoming grade 8 math work will be done on a paper packet. All work for each problem should be shown. Space has been provided on the packet but if your student feels more space is needed they may complete the problems on notebook paper which should be stapled to the back of the packet.

Incoming 8th grade students should be fluent in the multiplication tables up through the 12's table as well as with addition, subtraction, multiplication, and division of whole numbers, decimals, and fractions. They should also be proficient with conversions between the decimal, fraction, and percent names of a number. Order of operations should be followed routinely. Calculators should NOT be used as we are trying to increase our students' proficiency and number sense. The websites that are included are great for practice and enrichment.

This summer work should be completed by Friday, August 31st. Its **minimum** value will be a formative grade. Additional assessment grades will be based on curriculum connection and will be left to the discretion of the teacher.

All work should be done on the packet. Work can be done in a notebook if each problem is labeled and answers are written in the packet with work stapled to the back of the packet.

The following websites are helpful for both practice and enrichment.

Web Resources

http://www.khanacademy.org/exercisedashboard
http://www.learnzillion.com/lessons
http://www.ixl.com
http://www.mathisfun.com

Lessons will be added to Canvas and the packet will be located on the school website and on Canvas.

Name:_____ Math 8 Summer Packet

PART ONE: Number Sense

a) Write each fraction or mixed number as a decimal

1.) $-\frac{2}{5}$	2.) $\frac{7}{33}$	3.) $2\frac{7}{8}$

b) Write each decimal as a fraction or mixed number

4.) -3.92	5.) $0.\overline{1}$	6.) 0.387

c) Round the number **421.37605** to the correct digit

7.) Round to the nearest whole number	8.) Round to the nearest thousandth	9.) Round to the nearest tenth

d) Add and subtract the following rational numbers

10.) $2.18 - 0.99$	11.) $3.97 + 1.4$	12.) $\frac{2}{5} + 2\frac{4}{5}$

d) Add and subtract the following rational numbers

13.) $1\frac{5}{9} + 2\frac{2}{3}$	14.) $\frac{4}{7} - \frac{1}{2}$	15.) $\frac{2}{5} - \frac{5}{7}$

e) Add the following integers

16.) $-6 + (-3)$	17.) $-8 + 10$	18.) $-3 + 10 + (-6)$
19.) $-61 + (-39)$	20.) $-74 + 36$	21.) $-13 + (-8) + 12$

f) Subtract the following integers (See lesson-remember to add the opposite!)

22.) $-6 - 3$	23.) $-8 - (-10)$	24.) $13 - 21$

f) Subtract the following integers (See lesson-remember to add the opposite!)

25.) $7 - 16$	26.) $-9 - 4$	27.) $-6 - (-5)$

g) Multiply and divide the following rational numbers

28.) $(-6)(-8)$	29.) $(3.28)\ (4.1)$	30.) $\left(\frac{2}{3}\right)\left(\frac{3}{7}\right)$
31.) $(-12) \div (-2)$	32.) $2 \div 12$	33.) $\frac{2}{3} \div \frac{3}{7}$

h) Evaluate each expression; make sure to follow the order of operations (PEMDAS)

34.) $16 - 12 \div 4$	35.) $5 - 6 \cdot 2 \div 3$	36.) $2^3 - 32 \div 8 + 5$

37.) $(10 + 5) \div 3 + 5^2$	38.) $4(9) - 36 \div 3$	39.) $25 + 2 \cdot 8 \div 4$

i) Evaluate the following expressions if $a = -6$, $b = 4$, and $c = -5$.

40.) $a - 8$	41.) $b - a - c$	42.) $3c + b$
43.) $a(b + c)$	44.) $c^2 - 5b$	45.) $\frac{b+6}{c}$

PART TWO: Algebraic Expressions

a) Translate each phrase into a variable expression or equation.

46.) Four more than one third a number.	47.) Five less than three times a number
48.) The product of three and a number is 21.	49.) The sum of seven and three times a number is twelve.

b) Simplify the following expressions completely. Remember to distribute to both terms!

50.) $9(x+3)$	51.) $4(9+x)$	52.) $6(7d-a)$
53.) $-8(3m-2)$	54.) $3(4-7x)$	55.) $-1(x-4)$

c) Simplify the following expressions completely. Remember to combine like terms!

56.) $-x+6+5x-3$	57.) $4-x-7-5x$	58.) $x+5-x+2$
59.) $4+x-6$	60.) $3x+12-x$	61.) $x+5x$

PART THREE: Solving Equations

62.) $a + 9 = 13$	63.) $-54 + m = 82$	64.) $w - 83 = -100$
65.) $-5.1 + a = -6.6$	66.) $-x + 6 = 5$	67.) $16a = 512$
68.) $400 = -25h$	69.) $\frac{x}{5} = -4$	70.) $1.5x = -9$
71.) $\frac{p}{-12} = -11$	72.) $-\frac{2}{5}n = 30$	73.) $\frac{2}{3}x = -5$

For problems 14-19, you are solving two-step equations. Remember to use the reverse order of operations (you must add and subtract before multiplying or dividing!)

74.) $4x + 7 = 35$	75.) $17 + 6p = -73$	76.) $\frac{v}{5} - 2 = -6$
77.) $\frac{3}{7}x = -4\frac{2}{7}$	78.) $3y - 4 = 14$	79.) $\frac{1}{4}a - 2 = -3$

PART FOUR: Word Problems

Write an equation based on the facts of each problem, then solve. Show ALL work!

80.) Five more than a number is fifty-seven. What is the number?
81.) Yolanda paid $108 for 6 tickets to a hockey game. How much did each ticket cost?
82.) You clean a community park for 6.5 hours. You earn $42.25. How much do you earn per hour?