Eighth Grade Summer Packet

This packet has been put together for you to prepare for 8th grade.

Here's what to do:

- Print out the packet
- Work on the packet throughout the summer
- Show all of your work right on the packet

(Do not use a separate sheet of paper)

- Bring your packets with you on the first day of school in September

*****Calculators are NOT allowed*****

You will receive a TEST GRADE for the entire packet! This will be your first test grade of the year, so let's start off on the right foot! There might be questions in the packet that you do not know how to do; credit will be given if you showed that you tried.

Remember…if you need a little extra help, you can visit these websites!

http://www.classzone.com
http://www.mathwords.com
http://mathworld.wolfram.com
http://www.purplemath.com
http://www.mathisfun.com
http://www.math-drills.com

Keep working hard & enjoy your summer vacation!
See you in September!

INTEGERS

Add.

1. (-34) + (-77) = _____
2. (-32) + 19 = _____
3. 42 + (-45) = _____
4. (-55) + (-7) = _____
5. 3 + (-6) + 12 = _____
6. (-9) + (-6) + (-15) = _____

Subtract.

1. 15 – (-3) = _____
2. (-7) – 1 = _____
3. (-4) – (-6) =_____
4. 36 – (-41) = _____
5. (-1) – 6 – (-9) =_____
6. 21 – (-12) – 12 = _____

Multiply or divide.

1. (-4) ● (-10) = _____
2. 86 ● (-6) = _____
3. (-52) ÷ 13 =_____
4. 164 ÷ (-4) = _____
5. (-5) ● (-13) ● (-4) =_____
6. 204 ÷ (-3) ● (-7) = _____

Find each absolute value.

1. $|-15|$ = _____
2. $|11-14|$ = _____
3. $|-5,187|$ = _____
4. $|(-43)\bullet(-8)|$ = _____

Challenge Problem!

Evaluate. (calculate) 1. [2 + (-4)]+ 5 - [(-11) ·(-2)]- (-7)

EQUATIONS

Solve.

1. $x - 7 = 86$

2. $7 + 3y = -14$

3. $5b + 7b = 60$

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4. $\frac{x}{6} + 1.2 = -30$

5. $4(w - 9) + 7w = 52$

6. $1.5x - 1.2 = 1.8x$

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7. $-77 = -x + 55$

8. $5y + 20 = 0$

9. $-4.42y + 0.9 = -9.070 - 0.432$

FRACTIONS/DECIMALS/PERCENT

Use <, >, or = to compare each pair of numbers

1. $\frac{7}{8}$ _____ 0.82

2. -0.63 _____ $-\frac{5}{8}$

3. $1\frac{4}{5}$ _____ $\frac{21}{12}$

4. $-3\frac{1}{4}$ _____ $-3\frac{6}{25}$

5. $\frac{15}{27}$ _____ $\frac{16}{24}$

6. $\frac{8}{25}$ _____ 0.32

Write each percent as a decimal and as a fraction/mixed number in lowest terms

		Decimal	Fraction/Mixed Number
1.	82%	_____	_____
2.	60%	_____	_____
3.	8%	_____	_____
4.	135%	_____	_____

Order each group of numbers from least to greatest. Write your answer on the line.

1. $0.7,\ 0.\overline{7},\ \frac{3}{4},\ \frac{7}{8}$

_____

2. $-2\frac{2}{3},\ -2\frac{2}{5},\ -2.1,\ -2.25$

_____

Fraction Operations

1. $7\frac{3}{8}-4\frac{13}{33}=$ _____

2. $5\frac{9}{20}+1\frac{3}{5}=$ _____

3. $7\frac{3}{5}-\frac{4}{5}=$ _____

4. $\left(-\frac{3}{8}\right)+\left(-\frac{9}{20}\right)=$ _____

$-4 \bullet \frac{3}{5} =$ _____

$\frac{3}{8} \div \frac{7}{12} =$ _____

$\left(\frac{3}{16}\right) \bullet \left(3\frac{1}{5}\right) =$ _____

$15 \div 4\frac{1}{6} =$ _____

Decimal Operations

$0.1465 + 0.28 =$

$13.87 - 6.8412 =$ _____

$7.039 \bullet (-0.04) =$ _____

$(-4.844) \div (-0.56) =$ _____

$1.57 - 9.28 =$ _____

$1.46 + (-1.56) =$ _____

DATA, STATISTICS, & PROBABILITY

Find the mean, median, mode, and range for each set of data. Then display the data in a stem-and-leaf plot AND a box-and-whisker plot.

1. 30, 38, 42, 38, 17, 25, 44, 16

   Mean_____ Median_____ Mode_____ Range_____

2. 518, 581, 508, 588, 580

   Mean_____ Median_____ Mode_____ Range_____

Find the Probability

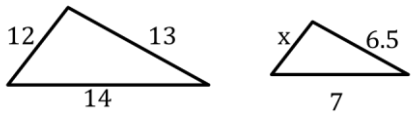
A bag contains 5 red, 6 blue, 7 yellow, and 8 purple marbles.

1. What is the probability that you randomly choose a marble that is **not purple**?_____

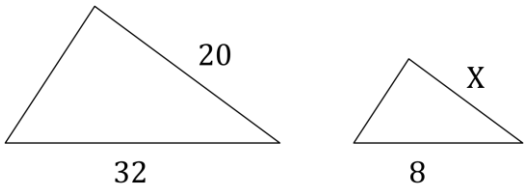
2. What is the probability that you randomly choose a red or yellow marble? ____

Each pair of triangles is similar. Determine the value of x

1.



2.



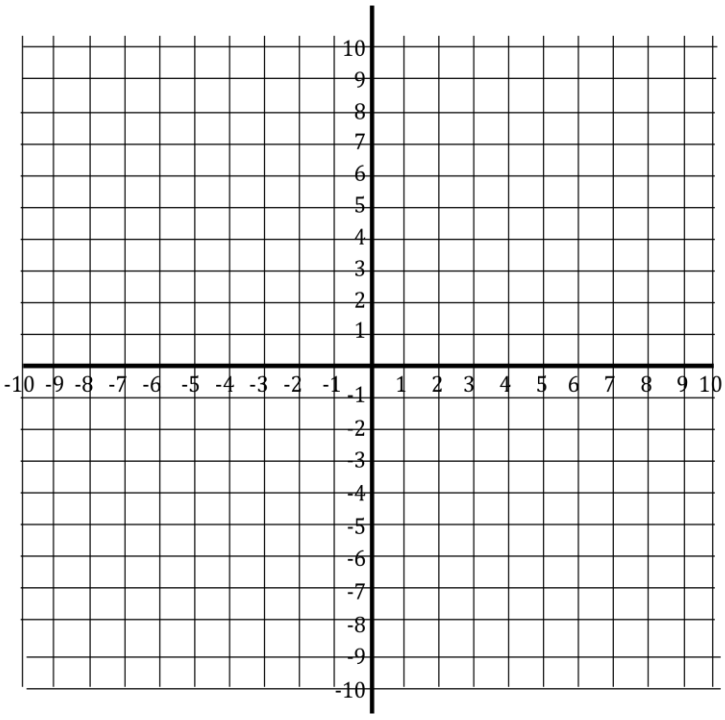
Name the quadrant or place in which each point lies.

1. (-4, -2)_____ 2. (0, -7)_____ 3. (0,0)_____

4. (6, -9)_____ 5. (3, 5)_____ 6. (8, 0)_____

Graph and label (with letters) these figures on the same plane.

1. PQRS: P(-2,4), Q(-5,4), R(-8,0), S(-2,0)
   TUVW: T(4,8), U(8,8), V(8,0), W(4,0)
   ABC: A(0,-3), B(0,-7), C(-6,-7)
   DEFG: D(3,-1), E(5,-3), F(3,-5), G(0,-5)



Expressions and Exponents

Evaluate the expression for the given values.

1. $4x - 5$, for $x = 7$

2. $\frac{50 - x}{y + 3}$, for $x = 5$ and $y = -5$

Evaluate the expression

3. $(2 + 1)^4 \div 9 - 4 =$ _____

4. $(5 \bullet 3)^2 - (63 \div 7)^3 =$ _____

Ratios, Proportions, and Percents

Find the unit rate

1. $\frac{\$0.56}{8 \text{ lbs}} =$ _____

2. 7 phone calls in 2 hours

Write the ratio as a fraction in simplest form

3. 65 to 30 =_____

4. $\frac{18}{63} =$ _____

Solve the proportion by cross-multiplying and dividing

5. $\frac{20}{x} = \frac{16}{5}$

6. $\frac{y}{4} = \frac{11}{5.5}$

7. $\frac{3.6}{3} = \frac{b}{4.4}$

Find each value

1. 60% of 25 is what number?_____

2. 18 is 45% of what number?_____

3. What percent of 600 is 180?_____

4. The cost of a meal is $45.50 and you leave an 18% tip. What is the total cost of the meal? Round to the nearest cent.

5. You spend $124.00 shopping, but the store is offering a 30% discount. What is the total cost after the discount? Round to the nearest cent.

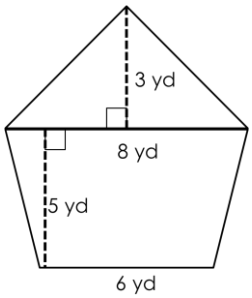
_____

Measurement, Area, and Volume

Parallelogram $A = b \times h$ Trapezoid $A = \frac{1}{2}(b_1 + b_2)h$ Triangle $A = \frac{1}{2} \times b \times h$

Find the area of each figure

1.



2.