Grade 8

Norman S. Edelcup Sunny Isles Beach K-8
Summer Packet

Here's what to do:

- Print out each packet
- Work on each one 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 August

*****Calculators are NOT allowed, unless only used to check your work!*****

There might be questions in the packets that you do not know how to do; credit will be given if you showed you tried!

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

https://login.i-ready.com
https://www.tenmarks.com
http://www.floridastudents.org
https://www.reflexmath.com
http://interactivesites.weebly.com/math.html

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

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.

1. $[2+(-4)]+5-[(-11)\bullet(-2)]-(-7)$ = _____

EQUATIONS & INEQUALITIES

Solve.

1. $x - 7 = 86$

2. $7 + 3y = -14$

3. $5b + 7b = 60$

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

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

6. $1.5x - 1.2 = 1.8x$

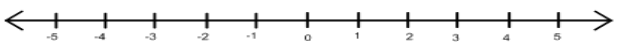
7. $-77 = -x + 55$

8. $5y + 20 = 0$

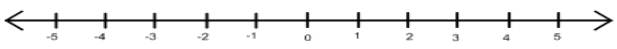
9. $-4.42y + 0.9 = -9.070 - 0.432y$

Solve and graph.

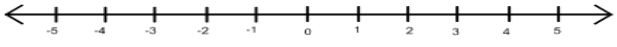
1. $10 + 4y < 18$



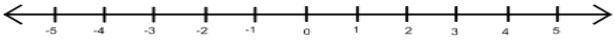
2. $4x + 7 \geq 11$



3. $-13x < 52$



4. $7m - 3m \geq -4$



FRACTIONS/DECIMALS/PERCENTS

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

_____

Challenge Problem!

Complete the statement using >, <, or =.

1. 25% of 80 _____ 125% of 12

FRACTION OPERATIONS

Add, subtract, multiply, or divide. All answers must be in fraction/mixed number form.

1. $7\frac{3}{11} - 4\frac{13}{33}$ = _____

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

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

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

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

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

7. $\left(6\frac{3}{16}\right) \bullet \left(3\frac{1}{5}\right)$ = _____

8. $15 \div \left(-4\frac{1}{6}\right)$ = _____

DECIMAL OPERATIONS

Add, subtract, multiply, or divide. All answers must be in decimal form.

1. $0.1465 + 0.28 =$ _____

2. $13.87 - 6.8412 =$ _____

3. $7.039 \bullet (-0.04) =$ _____

4. $(-4.844) \div (-0.56) =$ _____

5. $1.57 - 9.28 =$ _____

6. $1.4678 + (-1.564) =$ _____

7. $(-9.767) \bullet (-4.089) =$ _____

8. $37.41 \div (-4.3) =$ _____

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

   Mean_____ Median_____ Mode_____ Range_____

2. 518, 581, 508, 588, 580

   Mean_____ Median_____ Mode_____ Range_____

Find the probability.

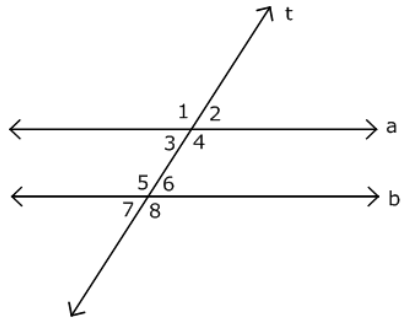
1. A bag contains 5 red, 6 blue, 7 yellow, and 8 purple marbles. What is the probability that you randomly choose a marble that is not purple?

   _____

2. The spinner at the right is divided into equal parts. What is the probability that the pointer lands on:
   - A prime number? _____
   - An even number?_____
   - The number 3? _____

GEOMETRY

In the following diagram, lines a & b are parallel and line t is a transversal line. The measure of angle 8 is 117˚. Use this information to answer the questions.



1. Name both pairs of alternate interior angles.

   _____

2. $m\angle 2 =$ _____

3. Name a pair of corresponding angles.

   _____

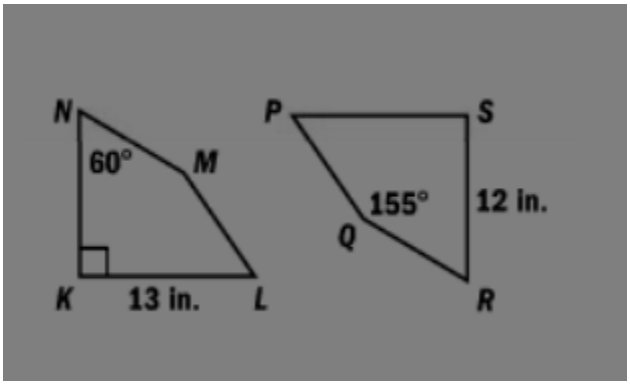
4. $m\angle 5 =$ _____

5. Name a pair of vertical angles. _____

6. Name both pairs of alternate exterior angles._____

7. What kind of angles are $\angle 1 \& 2$? _____

In the following diagram, quadrilateral KLMN ≅ quadrilateral SPQR. Use this information to answer the questions.



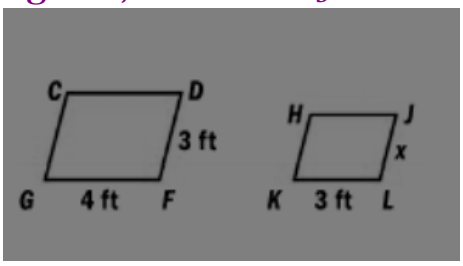
1. $m\angle S =$ _____

2. Find the length of $\overline{NK}$ = _____

3. $m\angle LMN$ = _____

In the following diagram, CDFG ~ HJLK. Use this information to find the value of x.

1. x = _____



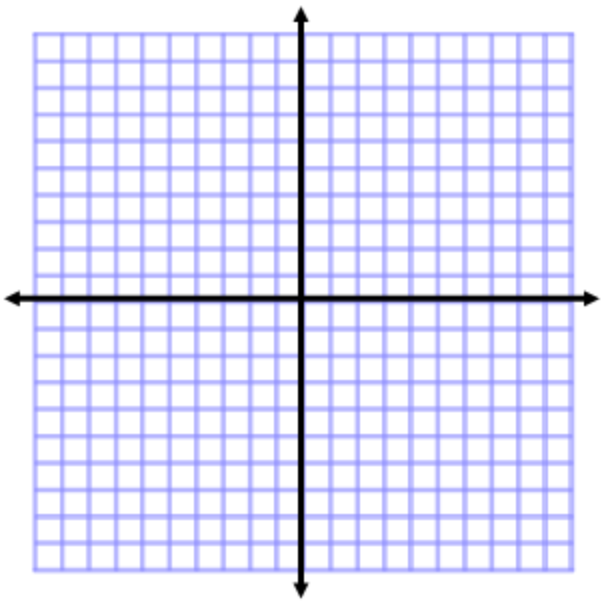
Name the quadrant or place in which each point lies.

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 & EXPONENTS

Evaluate for the given value. Write your answer on the line.

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

_____

2. $(a \div b)^2 + (a \bullet b)$, for a = 77 & b = 11

_____

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

_____

4. -8(b – c) + 8(b + c), for b = 3 & c = -3

_____

Evaluate each expression.

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

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

3. $\frac{3}{4} \bullet 4 + 6^2 \div 9$ = _____

4. $\left[(9 - 7)^5 + 17\right] \div \left(-\frac{1}{7}\right)$ = _____

RATIOS, PROPORTIONS, & PERCENTS

Find the unit rate.

1. $\frac{\$56}{8lbs}$ = _____

2. 7 phone calls in 2 hours = _____

Write the ratio as a fraction in simplest form.

1. 65 to 130 = _____

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

Solve each proportion by cross-multiplying.

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

2. $\frac{y}{22} = \frac{11}{5.5}$

3. $\frac{3.6}{3} = \frac{b}{14.4}$

Find each value.

1. 60% of 25 is what number? _____

2. 18 is 45% of what number? _____

3. What percent of 600 is 180? _____

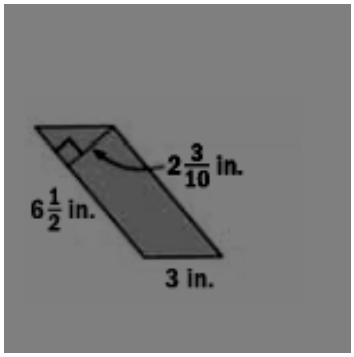
4. The cost of a meal is $35.27 and you leave an 18% tip. What is the total cost of the meal? Round to the nearest cent. _____

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, & VOLUME

Find the area of each figure.

1.



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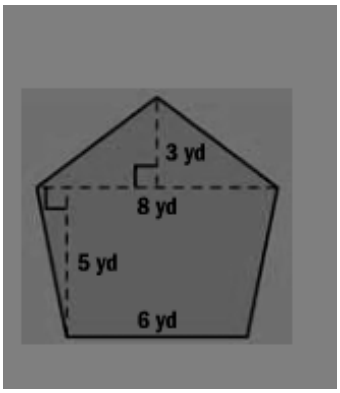


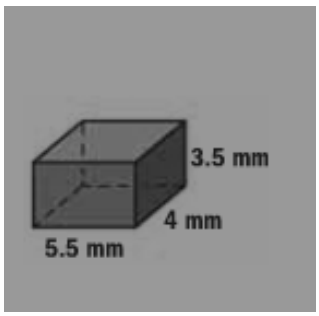
Use the Pythagorean Theorem (Formula) to find the missing side length.

1. a = ?, b = 9 ft, & c = 15 ft

2. a = 0.9 cm, b = 1.2 cm, & c = ?

Find the volume of each figure. Use 3.14 for π.

1.



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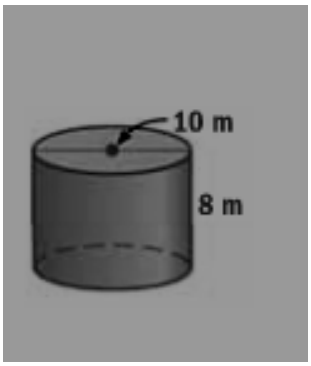

In this cylinder, the diameter is 10m.