SUMMER PACKET 2019

6th Grade Core

1.)Prime or Composite?

a.) 9

b.) 22

c.) 1

d.) 57

2.) Name the property/identity illustrated:

a.) $a(b+c) = ab + ac$

b.) $a + b = b + a$

c.) $a + (b + c) = (a + b) + c$

d.) $ab = ba$

e.) $a + 0 = a$

3.)Find the GCF of 15 and 85

4.) Find the LCM of 36 and 90

5.)Is:

a.) 6,300 divisible by 3? Prove it.

b.) 520 divisible by 5?

c.) 456 divisible by 4?

d.) 1,090 divisible by 10?

6.)List the first 10 multiples of 3:

7.)Write the prime factorization of 60 using exponents:

8.) List the factor pairs of 90. Use the rainbow trick!

9.) List the proper factors of 18:

10.) Solve:

a.) $\sqrt{36}$

b.) $\sqrt{125}$

c.) $\sqrt{169}$

d.) $\sqrt{324}$

e.) 5^0

f.) 3^2

g.) 23^1

h.) 4^4

11.) List the first 10 square numbers:

12.) Which represents an equation?

a.) 3
b.) $3 < 12$
c.) $4 \leq 10$
d.) $5 + 1 = 6$

13.) Solve for x in each equation:

a.) $x - 100 = 55$

b.) $78 \div x = 6$

c.) $\frac{12}{x} = 3$

d.) $4 + x = 9$

14.) Rename each fraction as a decimal. Label as <u>repeating</u> or <u>terminating</u>.

$\frac{30}{50}$ $\frac{6}{8}$ $\frac{1}{3}$ $\frac{2}{20}$

15.) Place the fractions in order from least to greatest:

$$\frac{2}{5}, \frac{2}{3}, \frac{1}{8}, \frac{3}{4}, \frac{5}{8}, \frac{1}{3}, \frac{5}{6}, \frac{3}{8}$$

16.) Solve if a = $\frac{1}{2}$, b = 3 and c = $\frac{1}{5}$

a.) a + b^2 - c

b.) a x b + c

17.) Use the distributive property to re-write the expression:

a.) 3(x + 7) =

b.) 5(x + 5.3) =

Solve. Reduce all answers to LOWEST TERMS!

18.) a.) $2\frac{1}{9} + 1\frac{3}{5}$ =

b.) $3 + 1\frac{1}{4}$ =

c.) 20 - $1\frac{3}{5}$ =

d.) 5 $\frac{3}{10}$ - 4 $\frac{4}{5}$ =

e.) $\frac{2}{5}$ x $\frac{1}{5}$ =

f.) $2\frac{2}{3}$ x 3 $\frac{4}{5}$ =

g.) 100 ÷ $\frac{4}{5}$ =

h.) 5 $\frac{7}{10}$ ÷ 4 $\frac{3}{5}$ =

19.) Decide if these ratios form a proportion. Prove your answer:

a.) $\frac{2}{3}$ and $\frac{8}{12}$

b.) $\frac{6}{15}$ and $\frac{13}{32}$

20.) Complete:

a.) $\frac{\$4}{3\ oz.} = \frac{\$16}{?}$

b.) $\frac{18\ mi.}{45\ sec.} = \frac{?}{15\ sec.}$

21.) Find the unit rate:

a.) $\frac{90\ m}{30\ sec.}$

b.) $\frac{10.16\ cm}{4\ in.}$

22.) Write as a decimal:

a.) Seven hundredths

b.) 4 and 31 thousandths

23.) Round to the nearest hundredth:

a.) .4127

b.) 12.9999

24.) Write in order from least to greatest:

5.068, 5.0068, 5.0980, 5.60098, 5.099, 5.6099, 5.066, 5.0088

25.) Rename each decimal as a fraction in lowest terms:

a.) 1.68

b.) 0.4565

26.) Solve following the Order of Operations:

a.) 3 x 2 + 4(10-2)

b.) $\frac{6 \div 3}{1+5}$

c.) .5 x .2 + .6

d.) 50 – 5(4 ÷ .2)

e.) 4 x 3 + $\sqrt{49}$ + 3^3

f.) $\frac{1}{2}$ x $\frac{1}{3}$ + $\frac{1}{4}$

27.) Complete the table below:

Fraction	Decimal	Percent
$\frac{5}{8}$		
		100%
	.02	
		14%
		1%
	1.2	
	.55	
$\frac{1}{3}$		
$\frac{1}{4}$		

28.) What is:

a.) 20% of 8?

b.) 50% of 12?

c.) 10% of 100?

d.) 25% of 200?

29.) A dress is on sale for 15% off the regular price. What will Ann pay for a dress marked $85 on the price tag? Round to the nearest cent as needed.

30.) You want to leave a 20% tip for your waitress for your dinner that cost $45.99 with your family. How much do you leave as a tip? Round to the nearest cent as needed.

31.) The tax in your state is 8%. How much sales tax will you pay on a new television set from Best Buy that costs $250.99?

32.) A map reads 1 in.: 40 miles. Find the actual distance:

a.) 2 inches =
b.) 10 inches =
c.) .5 inches =

33.) I want to fence in my pool for safety. The diameter of my circular pool is 4 meters. How much fencing will I need? (Use $\pi = 3.14$)

34.) Find the perimeter **and** area of a rectangle with a length of 2.5 feet and a width of 3 feet.

35.) Find the area of a parallelogram with a base of 5 inches and a height of 6 inches.

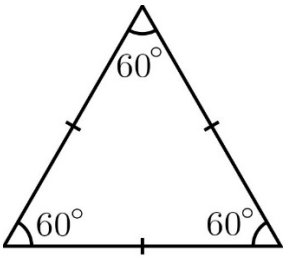
36.) Find the <u>area</u> of a triangle with a base of 10 cm and a height of 4 cm.

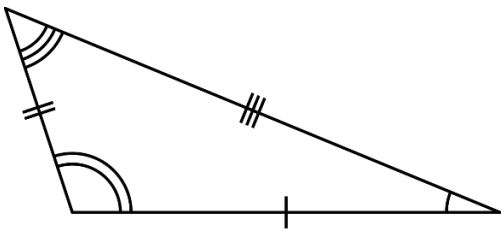
37.) Find the perimeter of a regular pentagon if one side measures 3 inches.

38.) a.) The sum of 2 complementary angles is _____

b.) The sum of 2 supplementary angles is _____

39.) Classify the triangles. Identify each triangle below as: acute, obtuse, right, scalene, isosceles or equilateral.





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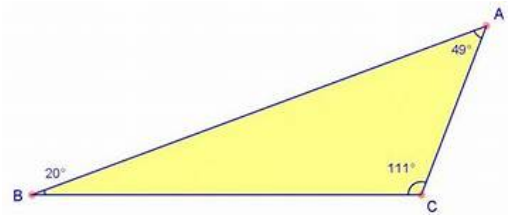

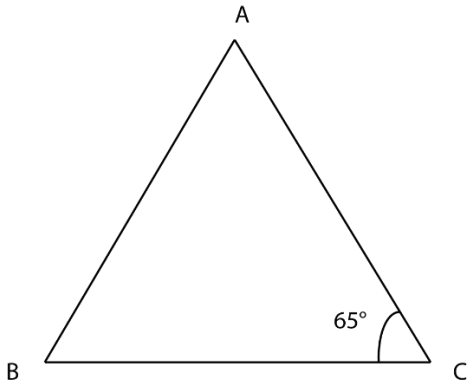

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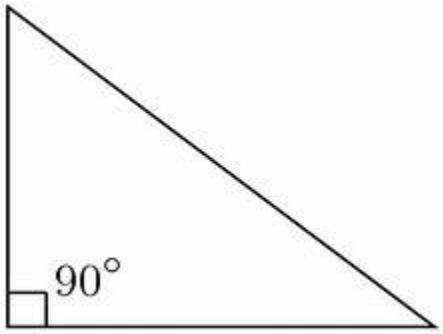
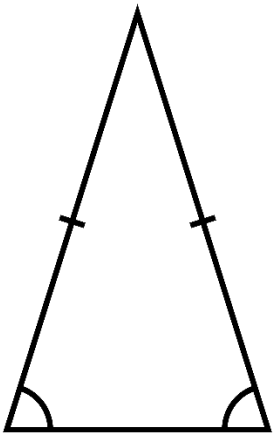




_____ _____

40.)Find the <u>surface area and volume</u> of a rectangular prism with side lengths 6 inches, 4 inches and 2 inches.

Surface Area: _____

Volume: _____

41.)How many sides in a:

Triangle?

Quadrilateral?

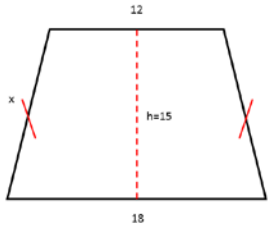
Pentagon?

Hexagon?

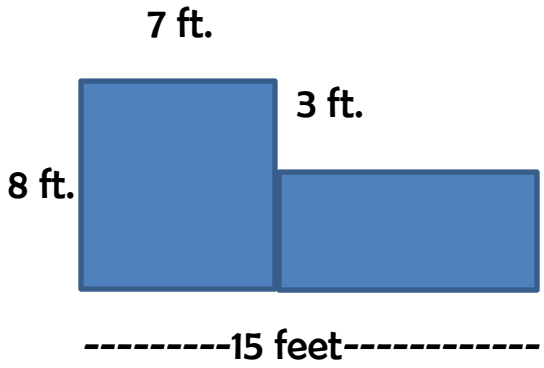
Octagon?

42.)How many lines of symmetry are there in a square? Draw to prove your answer.

43.)Find the area of the trapezoid: Height = 15, Base 1 = 12, Base 2 = 15



44.)Find the area of the compound shape:



45.)Find the mean, median, mode and range of the following data:

10, 19, 20, 10, 15, 15, 17, 15

Write the rule and fill in the empty boxes:

46.) Rule: _____

In	Out
35	34
36	35
43	
44	

47.) Rule: _____

In	Out
20	27
21	
32	39
43	

48.) Reggie spent less money than Kelsey but more money than Angie. Who spent less money, Kelsey or Angie?

49.) Yoshi has 8 coins worth $0.70. If the coins are all dimes and nickels, how many dimes and nickels does he have?

50.) Jake always takes the same route when he walks his dog. First, he walks 3 blocks to the park. Then he walks 3 blocks to the elementary school. Finally, he walks 6 blocks to get back home. Jake walks his dog 5 times each day. How many blocks does Jake's dog walk each day?

Congratulations!! Ur done-happy rest of summer ☺