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Name _____	3rd Quarter Date _____2020	Subject Math
Worksheet 1 (5%) Grade 8 Section ____		Teacher's Name: Mr. Assefa

I. Workout show the necessary steps neatly and clearly.

  1. Solve the following equations and inequalities.

   a. $\frac{2x-3}{5} + \frac{3x+1}{2} = 9/5$

   b. $\sqrt{3-x} = 4$

   c. $(3x-2) + 6x = \frac{11}{4}$

   d. -3x + 7 > x + 19 $(x \in Z)$

   e. $\frac{3x}{2} - \frac{4}{3} \geq \frac{2}{3} + \frac{3}{4}x$ $(x \in Q^+)$

   f. $\frac{2(x+1)}{5} - \frac{3(2-x)}{2} = \frac{2x-1}{3}$

  2. Find equation of a line that passes through:

   a. (3, 5) and(-2, 7)

   b. (1, 0) and (-4, 8)

  3. ΔABC $\sim$ ΔDEF, area of triangle ABC is $64cm^2$ and area of triangle DEF is $9cm^2$. If AB = 16 cm, what is the length of DE?

  4. $\Delta EFG \sim \Delta JKL$, if $EF = 3\ cm, JK = 6\ cm$ and area of $\Delta EFG\ IS\ 20\ cm^2$, then what is the area of ΔJKL?

  5. Define similarity theorems and explain by sketching their graph.

  6. In the figure given below O is the center of the circle. Find the value of the variables x, y and m. m(<ABD) = m, m(<CBD) = 40^0, m(<AOD) = y, m(<COD) = x, m(<OAB) = 15^0

C
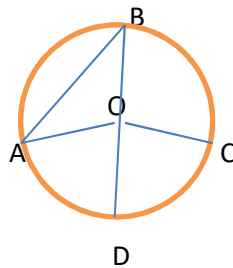
7. Three coins are tossed at the same time. What is the probability of getting:
   a. Exactly two heads
   b. Only one head
   c. No head at all
   d. Exactly four tails
   e. At least one tail

8. A letter is chosen at random from the word MATHEMATICS. Find the probability that it will be:
   a. The letter H
   b. The letter T
   c. The letter I or E

9. If consecutive angles of cyclic quadrilateral are 80^0 and 70^0, find the degree measure of its opposite angles respectively.

10. Two triangles are similar with ratio of corresponding sides 2/5
    a. Find the ratio of their perimeters
    b. Ratio of their area
    c. If the area of the smaller one is 32 cm^2, what is the area of the larger one?

11. For the data 30, 20, 25, 20, -30, 15, 0, 30, 40, 20, find
    a. Mean
    b. Median
    c. Mode
    d. Range

12. Find sum of interior angles, total diagonals and number of triangles of octagon,

Submission Date Friday 27, March 2020

Parents/Guardians signature_____