HOME REVISION MATERIALS 2020

S 2 MATHEMATICS set 1.

Instruction: *Attempt all questions.*

1. Express 0.8888……. as a fraction .

2. Find n in $105_n = 69_{ten}$

3. $\frac{3}{5}$ of the pupils in a school are boys. If there are 96 girls in the school, how many pupils are there in that school. ?

4. Simplify the following as far as possible $\frac{7}{8} \, of \left(3\frac{1}{4} - 2\frac{1}{7} \right) + \frac{1}{2}$

5. A bus traveling at an average speed of 64 Km/hr can cover a certain distance in 4 hours. How long would the same journey take a bus moving at an average speed of 80Km/hr.

6. Use a papygram to show the relations on the set below ;

   A= $\{3,5,10,15,20,25\}$. Relation "is a multiple of "

7. Using the rule $3x - 2$, Find the domain if the range is $\{4,10,16,22\}$. Hence draw an arrow diagram for the relation between the domain and range.

8. Ali deposited Sh. 56,000 in a bank. The bank gives a simple interest of 15% per annum. Find the amount of money he had in the bank after two years.

9. Given the vectors $\mathbf{a} = \begin{pmatrix} 2 \\ 1 \end{pmatrix}$, $\mathbf{b} = \begin{pmatrix} 0 \\ 3 \end{pmatrix}$ and $\mathbf{c} = \begin{pmatrix} 8 \\ 13 \end{pmatrix}$, find the values of the constant p and q such that $\mathbf{c} = p\mathbf{a} + q\mathbf{b}$.

10. Given the function $f(x) = \frac{x+2}{x-4}$, find

    i). $f(-3)$

    ii).   Value of x if $f(x) = 0$

11. In a class of 80 learners, 35 like mathematics (M), 50 like physics (P) 11 like both Maths and physics. Find the number of learners who.

   i).   like none of the 2 subjects.

   ii).   Do not like maths.

   iii).   Do not like physics

   iv).   like only one subject.

12. A rectangle of length $(4x-1)$ cm and breadth $2x$ cm has an area of $(288-2x)$cm^2.

   Find;

   a).   the value of x

   b).   Its length and breadth

   c).   its perimeter

13. After a lesson, 10 questions were given to S.2 students as a home work to be handed in the following morning. When they were collected and marked, the following marks were obtained.

5	9	7	2	9	8	7	3
8	7	7	10	9	7	6	6
8	5	6	8	4	7	8	7
5	9	6	7	9	7	6	5
10	5	10	6	8	4	6	6

Draw a frequency table for these scores and use it to find;

   i).   the mean

   ii).   The mode

   iii)   the modal frequency.

END