MID TERM III EXAMS 2018

S.1 MATHEMATICS

TIME: 2 HOURS

INSTRUCTIONS

- Answer all questions in this paper

SECTION A

1. If $x * y = {}^x/_y$, determine

   i. $2 * 3$

  ii. $4 * (2 * 3)$

2. Solve for x in the equation
$$\frac{x + 1}{4} = \frac{5x + 2}{3}$$

3. Given the equation of the line y=5x+6,

  i.   State the gradient of the line

 ii.   Determine the mid points of the line passing through(0,-2) and B(4,6)

4. Determine the HCF and LCM of 24,36 and 72

5. Determine the sum between the 80th triangular and 64th even number.

6. State whether 343 is divisible by 7 and show your working

7. Express $0.\overline{83}$ as a rational number (in the form ${}^p/_q$), hence state the value of $\frac{p+q}{p-q}$
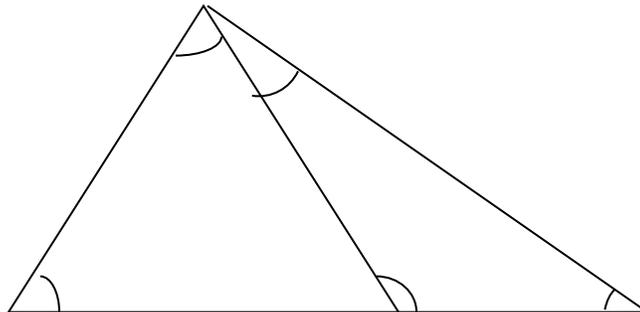
8.

Given that $n(\epsilon) = 62$, $n(A \cap B^I) = x$, $n(B) = 23$, $n(A \cup B)^I$

    i)   Determine the value of x

    ii)   Determine $n(A \cap B)^I$

SECTION B

    9.   The interior angle of a regular polygon is 135^0

      i.   The number of sides of the polygon and hence name the polygon

      ii.   The number of triangles, right angles anf the other interior angle sum of the above polygon

b) study the figure below and use it to answer the questions that follow

10. Using a ruler,a pencil and pair of compasses only, construct a triangle PQR where PQ=7.5cm,<QPR=30^0 and <QPR=45^0.

b) Inscribe a circle,measure its radius and determine the area of the above circle. (Take $\pi=^{22}/_7$)

11. a) solve form in the equation

$$\frac{5m}{4} + 7 = \frac{2m}{5} + 2$$

b) workout: $\dfrac{\left(1\frac{1}{2}of\frac{3}{2}\right)+\frac{2}{3}}{1\frac{1}{4}X\frac{4}{5}-\frac{1}{2}}$

----**END**------**STRUGGLE CONTINUES...............**