

END OF TERM ONE EXAMINATIONS 2018

S.1 MATHEMATICS

TIME: 2 HOURS

INSTRUCTIONS

- Attempt all questions in both sections
- Proper display of all the working is required

SECTION A (50 MARKS)

1. Solve for x in: $\frac{(3x-2)}{4} + \frac{(2x-3)}{5} = \frac{1}{10}$ (4mks)
2. Three bells are rang at intervals of 15 minutes for kindergarten, 45 minutes for primary and 60 minutes for secondary. Determine
 - a) How long will it take for the three bells to be rang again the same time?
 - b) If they were first rang at 8:30 a.m., at what time will they ring again? (5mks)
3. a) prime factorize $(\frac{108}{81})$
c) b) find the square root of $1\frac{11}{25}$ (5mks)
4. Express the recurring decimal 0.3535... as a fraction in its simplest form (4mks)
5. Kawuma shared his salary and gave $\frac{1}{3}$ to his wife, $\frac{1}{4}$ to his daughter and $\frac{1}{2}$ of the remainder to his son.
 - a) What fraction did kawuma remain with?
 - b) If kawuma's salary is shs.600, 000, determine the amount of money kawuma remained with? (6mks)
6. Given two sets $P = \{\text{first five multiples of } 5\}$

$$Q = \{\text{all factors of } 75\}$$

- a) Determine
 - i) $n(P \cap Q)$
 - ii) $n(P \cup Q)$

b) Represent the information on a Venn diagram (5mks)

7. The operation $P * q = \frac{2p+q}{3}$.

Determine the values of

i) $1 * 4$

ii) $2 * 2$

iii) $\frac{(1 * 4)}{(2 * 2)}$ (5mks)

8. Given that the sum of three consecutive even numbers is 96

a) Determine the numbers

b) Find the i) mean of the numbers

ii) Range (6mks)

9. In a group of 25 men, 10 support Manchester (M), 8 support Arsenal (A) and 10 support neither teams.

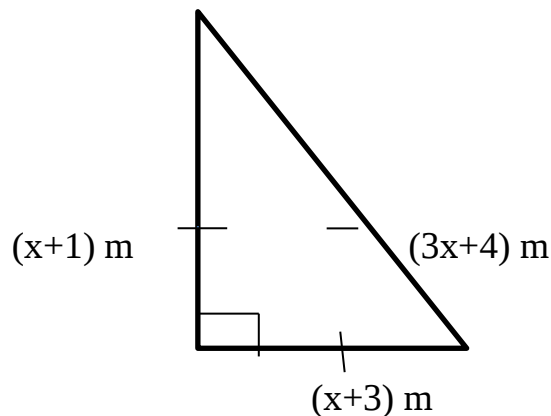
a) How many men support either teams

b) Represent the information on a venn diagram (5mks)

10. Find the L.C.M and H.C.F of 20, 30 and 72 (5mks)

SECTION B (25 MARKS)

11. The figure below shows a triangle piece of land



Given that the perimeter of the land is 28m, determine the

i) Value of x

ii) Area of the land in m^2 (6mks)

b) given that the land is to be divided equally among three children, how much land will each child get? (3mks)

c) Convert the area in (b) above in cm^2 (2mks)

12. a) simplify the following fractions

i) $\frac{8}{1} + \frac{1}{2} + \frac{1}{4}$ (4mks)

$$\frac{\frac{1}{8}}{\frac{1}{8}}$$

ii) $\frac{1}{3} + \frac{7}{2} + \frac{1}{8}$ (3mks)

iii) $2\frac{1}{8} + 3\frac{1}{2} + \frac{1}{4}$ (3mks)

b) list down the

i) multiples of 10 less than 70

ii) factors of 72 (4mks)

***** END***** GOOD LUCK*****