Moderated item 6

MATHEMATICS
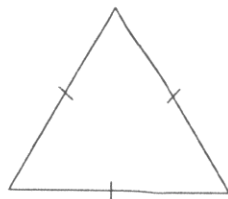*Time Allowed: 2 Hours 30 Minutes*

SECTION A (40marks)

1. Divide: $36 \div 4$

2. Expand 43.5 using powers of ten.

3. Find the supplement of $39°$.

4. How many lines of symmetry has the figure.

. Round off 67.49 to the nearest whole number.

6. Find the next number in the sequence: 5, 7, 10, 15, 22, _____

7. Solve: $x + 3 = 2x - 5$

8. Write 0.00705 in scientific notation.

9. The distance between two towns is 45km; this distance is 5cm on a map of Uganda. What is the scale of the two towns?

10. Using a protractor, draw an angle of 115° in the space below.

11. Express 0.75 as a ratio in its lowest term.

12. Simplify $⬚ + 2⬚ - 3⬚ - 2⬚$

13. Use the Venn diagram below:

Find n(m∩f)′

$n(\Sigma) = 17$

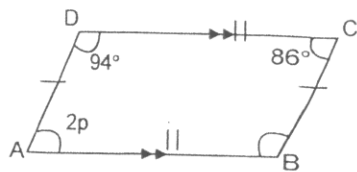$n(⬚) =$ $n(⬚) =$

5   3   4
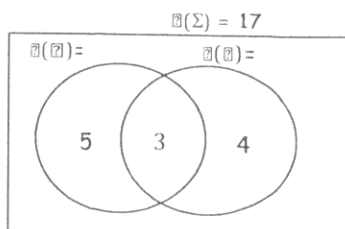
14. Solve: $⬚ + \dfrac{1}{3}⬚ \geq 12$

15. The probability of passing this math paper is $\dfrac{5}{7}$, find the probability of failing it.

16. Divide: $2 \div 3 =$ _____ (finite 5)

17. Find the volume of a cube of side 5dm.

18. Jamwa ran 100m in only 10seconds, express his speed in km/hr.
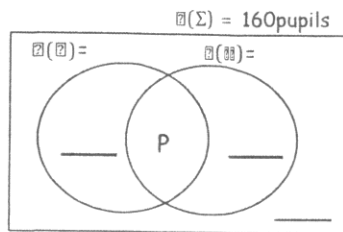
19. Use the figure below.

Find P.

20. Use distributive property to work out: $(57.4 \times 6) + (4.2.6 \times 6)$

<u>**SECTION B (60marks)**</u>

36

21. In a class of 160 pupils, 65 like volley only, 55 like football only, 25 like neither of the two games while p like both games.

(a) Use the above information to complete the Venn diagram below. (2marks)

n(Σ) = 160pupils

n(𝒱)=   n(𝐹)=

P

(b) Find p. (2marks)

(c) Find the probability of those who like only one game to be the captain. (2marks)

22. Matilda bought a tray of eggs at sh. 500 per egg on her way 6 eggs broke and she sold the remaining eggs at sh. 600 per egg. Calculate the percentage loss. (2marks)

23. A bus left town K at $7:15am$ after $2\frac{1}{2}hrs$ it reached town T, a distance of $200km$ it continued to town M at a speed of $80km/hr$ and reached the town at $11:45am$.

(a) When did it reach town T? (2marks)

(b) How long did it travel from town T to town M. (𝟐marks)

(c) Calculate the average speed for the whole journey. (𝟐marks)

24. (a) Using a ruler, pencil and a pair of compasses only construct a triangle 𝟐𝟐𝟐 where
𝟐𝟐 = 7𝟐𝟐, angle 𝟐𝟐𝟐 = 45°and 𝟐𝟐= 6.2𝟐𝟐. (𝟐marks)

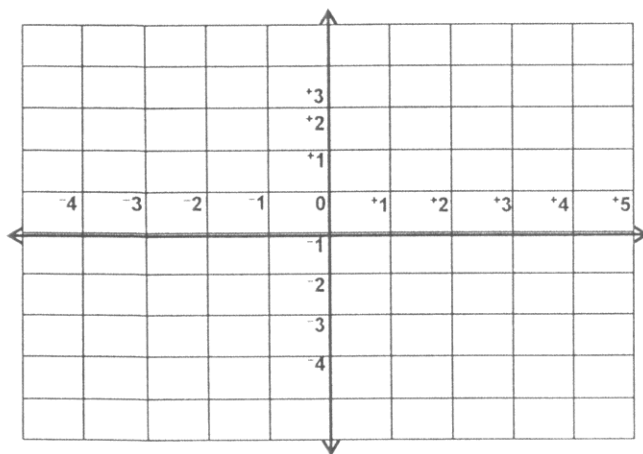(b) Measure: (𝟐marks)
   i. 𝟐𝟐𝟐 _____

   ii. Length 𝟐𝟐 _____

25. Lala turned anti – clock wise an angle of 135°from south west direction.
(a) What direction is she facing now? (𝟐marks)

(b) The bearing of town K from town M is 130°. find the bearing of town M from town K.

(᠎m᠎᠎ks)

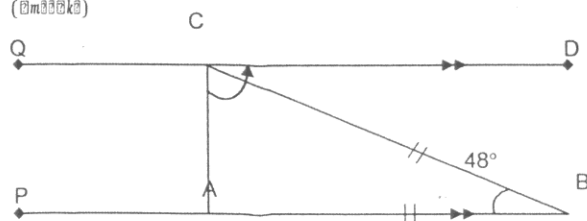**26.** (a) Plot the given points on the grid below: A(⁻2, ⁻2) B(⁺4, ⁻2) C(⁺4, ⁺2) D(0, ⁺2)

(᠎m᠎᠎ks)

(b) Join the points A to B to C to D to A.

(᠎m᠎᠎᠎)

(c) What special name is given to figure formed.

(᠎m᠎᠎᠎)

27. In the figure below, ᠎᠎᠎ is a triangle, ᠎᠎ = ᠎᠎, ᠎᠎᠎ is parallel to ᠎᠎᠎ and angle ᠎᠎᠎ = 48°.

Find the size of angle ACD.

(᠎m᠎᠎ks)

39

28. Jadwong bought a receipt book numbered 634201 to 634300 to be sold to anybody who would attend the school music concert. Each receipt was sold at Ush. 5000 for whoever enters the concert. If all the receipts were sold:

(a) How many people attended the concert? (2marks)

(b) How much money was collected for the concert? (2marks)

29. (a) Write ninety-four thousand nineteen in numerals. (2marks)

(b) Write a single numeral for $(3\times 10^3)+ (7\times 10^1)+ (9\times 10^0)+ (8 \times 10^{-1})$ (2marks)

30. (a) Subtract: $3\square - 4\square \square\square\square\square 2\square + \square.$ (2marks)

40

(b) Solve: $4 + \dfrac{1}{2}x \leq 3$ (3marks)

31. Amina deposited **sh. 600,000** in a bank for 8 months. The bank gives an interest rate of $12\dfrac{1}{2}$ %per year.

How much money will she have in her account by the end of the period? (3marks)

32. Jacinta drove her car from point A to point B at a speed of 50km/hr. for 3hours. She made a return journey at a speed of 70km/hr.

(a) How far is from Point A to B. (3marks)

(b) How long did she take on her return journey? (3marks)