

MATHEMATICS

Time: 2 hours

READ THESE INSTRUCTIONS CAREFULLY

1. You have been given this question booklet and a separate answer sheet. The question booklet contains 50 questions.
2. Do any necessary rough work in this booklet.
3. When you have chosen your answer, mark it on the ANSWER SHEET, not in the question booklet.

HOW TO USE THE ANSWER SHEET

4. Use only an ordinary pencil.
5. Make sure that you have written on the answer sheet:

YOUR INDEX NUMBER
YOUR NAME
NAME OF YOUR SCHOOL

6. By drawing a dark line inside the correct numbered boxes mark your full Index Number (i.e. School Code Number and the three-figure Candidate's Number) in the grid near the top of the answer sheet.
7. Do not make any marks outside the boxes.
8. Keep your answer sheet as clean as possible and DO NOT FOLD IT.
9. For each of the Questions 1 – 50, four answers are given. The answers are lettered A, B, C and D. In each case only ONE of the four answers is correct. Choose the correct answer.
10. On the answer sheet the correct answer is to be shown by drawing a dark line inside the box in which the letter you have chosen is written.

Example

In the Question Booklet:

14. What is the area of a circle whose radius is 28cm?

- A. 308cm²
B. 2464cm²
C. 616cm²
D. 1232m²

The correct answer is B (2464cm²)

On the answer sheet:

4 (A) (B) (C) (D) 14 (A) (B) (C) (D) 24 (A) (B) (C) (D) 34 (A) (B) (C) (D) 44 (A) (B) (C) (D)

In the set of boxes numbered 14, the box with the letter B printed in it is marked.

11. Your dark line MUST be within the box.
12. For each question ONLY ONE box is to be marked in each set of four boxes.

This question paper consists of 8 printed pages.

Candidates should check the question paper to ensure that all the pages are printed as indicated and no questions are missing.

1. What is 7,090,528 written in word?
- Seven million ninety thousand five hundred and twenty eight.
 - Seventy million ninety thousand five hundred and twenty eight.
 - Seven million nine hundred thousand five hundred and twenty eight.
 - Seven hundred and ninety thousand five hundred and twenty eight.

2. What is the value of $\frac{882 - 966 \div 23}{12 \times 14}$?

- 60
- 70
- 50
- 5

3. What is the value of $\frac{1}{4}$ of $\frac{7}{10} - \frac{1}{8}$?

- 15
- $\frac{1}{5}$
- $\frac{1}{15}$
- $\frac{1}{20}$

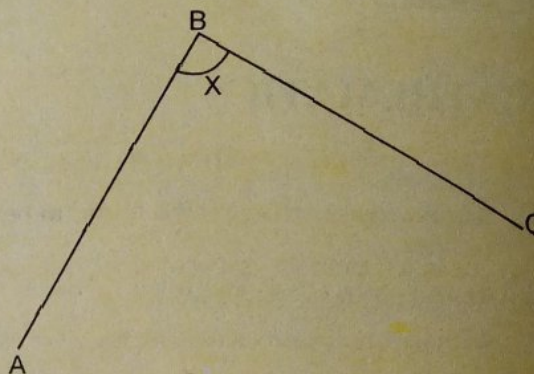
4. What is the value of 0.4 of $2.4 + 3.6 \div 12 - 0.8$?

- 0.46
- 4.6
- 46
- 460

5. What is 36899.99 rounded off to the nearest one decimal place?

- 36899.0
- 36900.00
- 36900.0
- 36899.9

6. In the figure ABC below what is the size of the reflex angle formed?



- 90°
- 180°
- 270°
- 360°

7. What is the difference in the squareroot of $3 \frac{6}{25}$ and the square of $\frac{2}{5}$?

- $1 \frac{16}{25}$
- $1 \frac{15}{25}$
- $2 \frac{2}{5}$
- 1

8. The table below show the prices of food at Mama Chai Hotel.

	Ugali	Mchele	Chapati	Chips
Beef	120	140	100	200
Fish	180	220	160	240
Sukuma	80	100	70	150

A group of eight people went to the hotel for lunch.

Two ate ugali samaki.

Two ate chips beef.

Three ate ugali sukuma.

The last one ate mchele beef.

How much money did they pay for lunch?

- Shs 960
- Shs 1140
- Shs 1200
- Shs 800

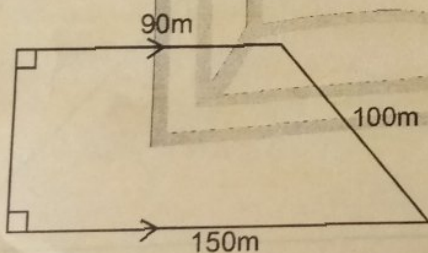
9. What is the simplest form
 $4(3x - 2y + 2) + 2(2y - 2x + 2)$

- A. $16x + 12$
- B. $8x + 12y + 12$
- C. $16x + 12y + 12$
- D. $8x - 4y + 12$

10. The fractions $\frac{3}{7}, \frac{5}{8}, \frac{1}{2}, \frac{2}{5}$ are to be arranged from the largest to the smallest. Which one is the correct order?

- A. $\frac{5}{8}, \frac{1}{2}, \frac{3}{7}, \frac{2}{5}$
- B. $\frac{2}{5}, \frac{3}{7}, \frac{1}{2}, \frac{5}{8}$
- C. $\frac{3}{7}, \frac{2}{5}, \frac{1}{2}, \frac{5}{8}$
- D. $\frac{5}{8}, \frac{3}{7}, \frac{2}{5}, \frac{1}{2}$

11. Omwani piece of land is in a shape of a Trapezium as shown below.



What is the area of the land in hectares?

- A. 0.96 ha
 - B. 9.6 ha
 - C. 96 ha
 - D. 960 ha
12. A rectangular piece of land measure 140m by 80m. The land is to be fenced using five strands of wire leaving a gate of 5m. What is the length of the wire used?
- A. 2200m
 - B. 440m
 - C. 435m
 - D. 2175m

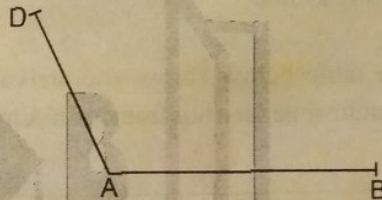
13. What is the next number in the pattern
 3, 4, 8, 17, 33, _____

- A. 53
- B. 58
- C. 63
- D. 51

14. What is the value $\frac{y+5}{3} = \frac{y-3}{2}$

- A. 1
- B. 19
- C. 6
- D. 5

15. The figure below shows an incomplete parallelogram. Complete the parallelogram ABCD.



What is the length of diagonal AC?

- A. 5.5cm
 - B. 6.2cm
 - C. 3.8cm
 - D. 4.6cm
16. The marked price of a T.V set is Sh 25000. The hire purchase price is 20% more than the marked price. A deposit of shs 6000 is paid and the rest paid in 12 equal monthly instalment. How much was each instalment?
- A. Shs 30 000
 - B. Shs 2 500
 - C. Shs 2 000
 - D. Shs 24 000
17. How many days were there between 25th January to 1st April year 2020?
- A. 65
 - B. 66
 - C. 67
 - D. 68

18. The mass of an empty carton is 0.25kg. It was packed with books until it weighed 17.75kg. If the mass of one book is 350g how many books were packed in three such cartons?
- A. 150
B. 50
C. 61
D. 183

19. A sales girl earns a basic salary of sh 18000. She is also paid a 5% commission on all the sales above sh 50000. How much did she earn when she sold goods worth sh 300,000?
- A. Shs 12 500
B. Shs 30 500
C. Shs 33 000
D. Shs 15 000

20. The table below shows the arrival and departure time for a bus from town A to town E.

Town	Arrival	Departure
A		8:00 a.m
B	9:45 a.m	10:00 a.m
C	11:20 a.m	1:55 a.m
D	1:05 p.m	1:55 a.m
E	3:20 p.m	

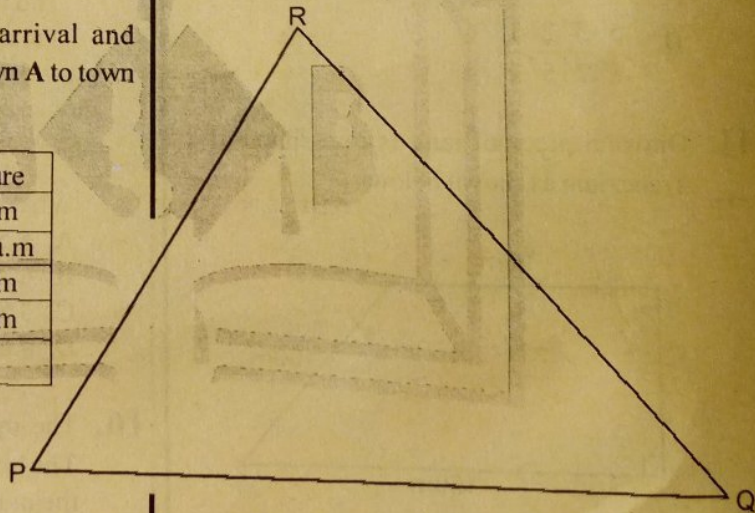
How long did it take the bus to travel from town B to town D?

- A. 1 hr 5 min
B. 3 hrs 35 min
C. 3 hrs 20 min
D. 3 hrs 5 min
21. What is the capacity in litres of a tank that measures 1.2m long 0.8m wide and 0.75m high?
- A. 0.72l
B. 7.2l
C. 72l
D. 720l

22. The mean of five numbers is 13. Four of the numbers are 16, 12, 11 and 15. What is the median number?
- A. 11
B. 13
C. 12
D. 15

23. The busfare increased from shs 500 to shs 600. What was the percentage increase?
- A. 25%
B. 10%
C. 20%
D. 15%

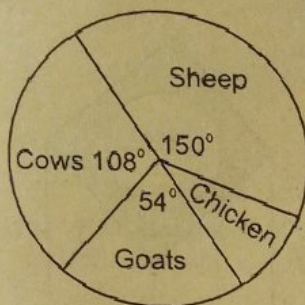
24. In the triangle PQR drawn below, construct a perpendicular from point R to meet line PQ at point X.



What is the length of the line XQ?

- A. 4cm
B. 5cm
C. 6cm
D. 10cm
25. The area of the curved surface of a cylinder is 2640cm^2 . If the height is 20cm, what is the radius of the cylinder?
- A. 42cm
B. 21cm
C. 14cm
D. 7cm

26. The piechart below shows the number of animals at Mwanamwali farm.

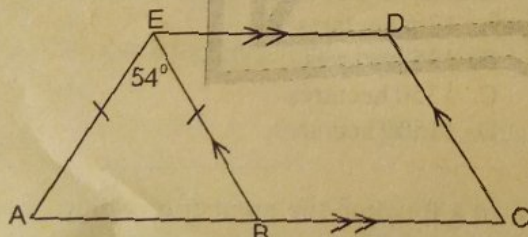


If there are 18 more goats than chicken, how many cows and sheep are there altogether?

- A. 774
B. 324
C. 450
D. 1080
27. What is the value of $21y - 12 < 36 + 13y$?

- A. $y < 8$
B. $y < 6$
C. $y < 3$
D. $y < 4$

28. In the figure below triangle ABE is an Isosceles triangle and BCDE is a parallelogram?



What is the size of angle AED?

- A. 63°
B. 126°
C. 117°
D. 73°
29. Karanja left Nyeri for Sagana at 11:46am and drove at a speed of 90km/h. He drove a distance of 60km, at what time did he get at Sagana?
- A. 3:26pm
B. 1:26pm
C. 2:26pm
D. 12:26pm

30. Jack and Joel shared some money in the ratio 3:4. If Jack got sh 2800 less than Joel, how much did Joel get?

- A. Sh. 8 400
B. Sh. 5 600
C. Sh. 19 600
D. Sh. 11 200

31. At Ole Muyaa's Farm there are 1200 animals. $\frac{5}{12}$ of these are sheep, goats are $\frac{3}{4}$ of the remainder and the rest were cows.

How many cows are there?

- A. 425
B. 175
C. 500
D. 900

32. Ochieng piece of land is in a shape of a rectangle. If the diagonal measures 260m and the width is 100m, what is the area of the land in square metres?

- A. 12000m²
B. 24000m²
C. 13000m²
D. 26000m²

33. The following are characteristics of a quadrilateral.

- (i) Has all sides equal.
(ii) Diagonals bisect at right angle.
(iii) Two pairs of parallel lines.
(iv) Diagonals are equal.

The quadrilateral described above is

- A. Rhombus
B. Parallelogram
C. Trapezium
D. Square

34. A bus reached its destination at 0635 hrs on Tuesday. After travelling for 15hrs 25 mins. At what day and time had the bus started the journey?

- A. Sunday 3:10pm
B. Monday 3:10pm
C. Tuesday 3:10am
D. Monday 3:10am

35. Keziah had shs. m . Carol had shs 30 less than Keziah while Tracy had half as much as the sum of Keziah and Carol. Which equation represent the information if the total amount of money was shs 360?
- A. $2m - 30 = 360$
 B. $2m - 54 = 260$
 C. $3m - 45 = 360$
 D. $4m - 60 = 360$

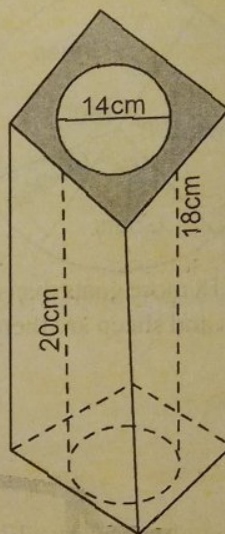
36. It takes 12 days for 6 men to do a certain job. How many more men are required to do the job in 8 days?
- A. 9
 B. 3
 C. 15
 D. 12

37. During a birthday party people chose their favourite meat as follows.
- 0.15 chose beef*
0.2 chose fish
0.3 chose chicken
The rest chose mbuzi

If those who chose fish were 80, how many chose mbuzi?

- A. 140
 B. 120
 C. 400
 D. 60

38. The figure below shows a rectangular block of wood measuring 20cm by 18cm by 30cm long. A hole of diameter 14cm was drilled through



What is the value of the remaining piece of wood in cm^3 ?

- A. 10800cm^3
 B. 4620cm^3
 C. 6180cm^3
 D. 6420cm^3

39. A rectangular piece of land is drawn to scale 1:30000. If the drawing measures 5cm long and 3cm wide, what is the area in hectares?
- A. 13.5 hectares
 B. 135 hectares
 C. 1350 hectares
 D. 13500 hectares.

40. In a function the number of women was thrice that of men. The number of children is twice the total number of men and women. The number of men attendants was 630. How many more children than women attended the function?
- A. 3150
 B. 2520
 C. 5040
 D. 1890

41. Ntapaiya paid sh 25500 for an item after getting 15% discount. How much more would he have paid if he was given 12% discount?
- A. Shs. 900
 B. Shs. 3 600
 C. Shs. 30 000
 D. Shs. 26 400

42. Daniel borrowed shs 50000. After two years he paid a total of shs 60000. At what rate per annum did the money earn simple interest?
- A. 5%
B. 10%
C. 20%
D. 25%

43. The hire purchase price of an item includes a deposit of sh 13000 and seven equal monthly instalments of shs 5000. If this is 20% more than the marked price, how much is the marked price?
- A. Shs. 8 000
B. Shs. 48 000
C. Shs. 40 000
D. Shs. 38 400

44. Robert bought a piece of land for shs 2 million. He subdivided it into 8 equal plots selling each plot at shs 400 000. What percentage profit did he make?
- A. 80%
B. 40%
C. 20%
D. 60%

45. Kamagut bought the following items from a shop.
- 2 - 2kg packets of unga @120 per packet
3kg rice @sh 110 per kg
2½ litres of milk at shs 50 per half litre.
3 litres cooking oil @shs 140 per litre.
3kg ndengu at sh 160 per kg

How much balance did he get if he paid using 2 - 1000 shilling notes?

- A. Shs 280
B. Shs 1 720
C. Shs 180
D. Shs 1 820

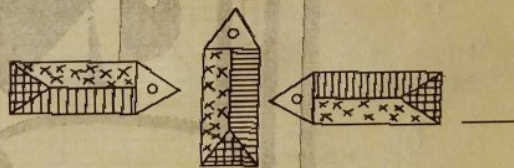
46. What is the square root of 0.0676?
- A. 0.026
B. 0.26
C. 2.6
D. 26

47. What is the value of $\frac{3x-3}{4} - 6 = 0$

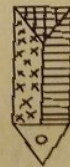
- A. 6
B. 9
C. 4
D. 3

48. A square plot has an area of 0.64 hectares. What is twice its perimeter?
- A. 320
B. 640
C. 80
D. 160

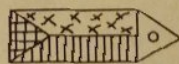
49. Which of the following is the next shape in the pattern?



A



B

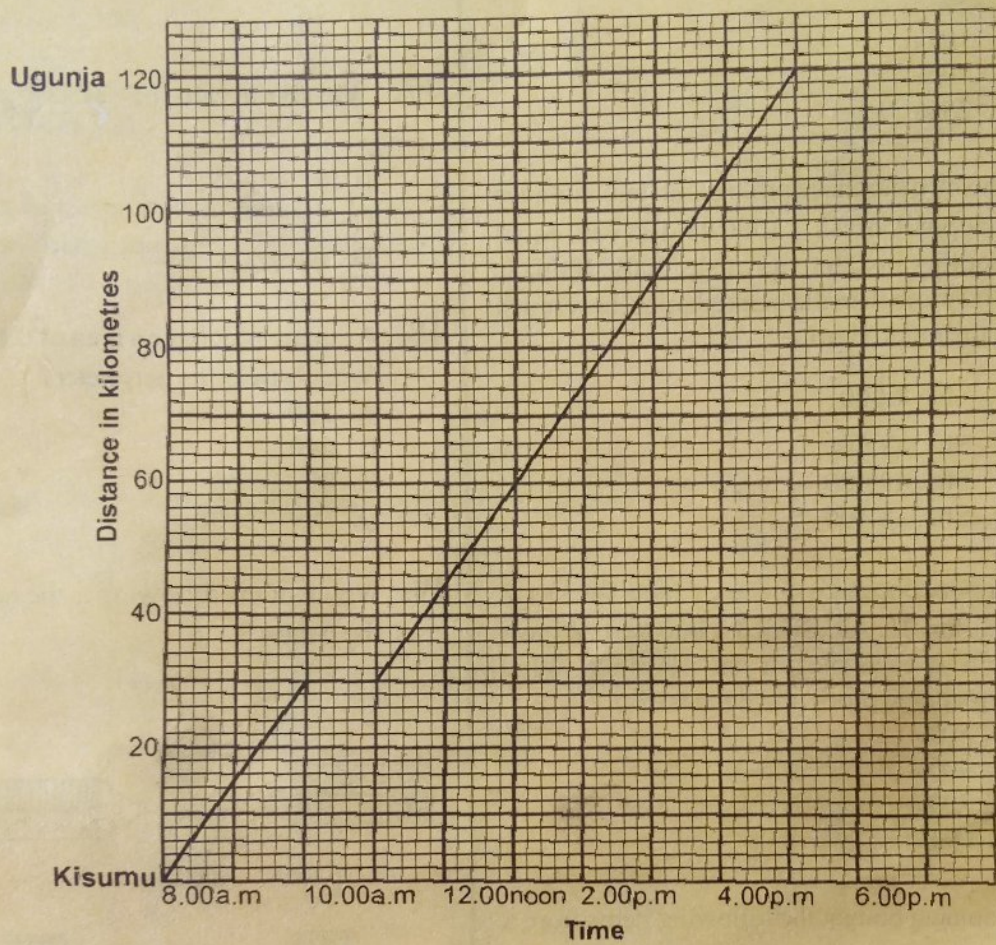


C



D

50. The graph below shows the journey by Omolo from Kisumu to Ugunja a distance of 120km. After travelling for 30km, he rested for half an hour and then continued with the journey arriving at 5:00pm.



What was his speed after the rest?

- A. $13\frac{1}{3}$ km/h
- B. 15 km/h
- C. 30 km/h
- D. 18 km/h