

**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  $1.225 \div 35$

- A. 35
- B. 0.035
- C. 3.5
- D. 0.35

The correct answer is B (0.035)

On the answer sheet:



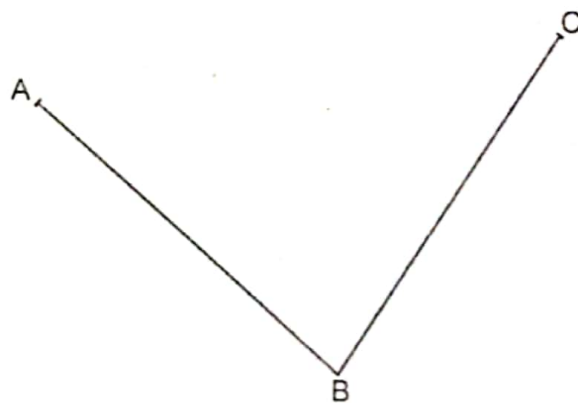
In the set of boxes numbered 14, the box with the letter B printed in it is marked.

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. Which of the following is six million ninety thousand four hundred and twenty eight?  
 A. 6 900 428      B. 6 900 248  
 C. 6 009 428      D. 6 090 428
2. What is the value of  $\frac{360 - (828 \div 23)}{18}$ ?  
 A. 36                      B. 18  
 C. 27                      D. 24
3. What is the value of  $\frac{3}{5} + 1\frac{3}{4} \div \frac{7}{12} - \frac{1}{5}$ ?  
 A.  $3\frac{29}{35}$                       B.  $3\frac{3}{5}$   
 C.  $3\frac{2}{5}$                       D.  $3\frac{27}{35}$
4. What is the value  $\frac{1.2 \times 0.4 + 0.8 - 0.24}{0.04}$ ?  
 A. 14                      B. 5.6  
 C. 26                      D. 0.56
5. What is 389 967 rounded off to the nearest hundred  
 A. 390 000                      B. 389 900  
 C. 399 000                      D. 380 000
6. What is the difference in the value of the square root of  $3\frac{1}{16}$  and the square  $\frac{3}{4}$ ?  
 A.  $1\frac{3}{4}$                       B.  $\frac{9}{16}$   
 C.  $1\frac{3}{16}$                       D.  $2\frac{5}{16}$
7. What is the measure of the reflex angle ABC drawn below?



- A.  $81^\circ$                       B.  $99^\circ$                       C.  $279^\circ$                       D.  $101^\circ$

8. The table below shows the price list of food at Kula Ushibe Hotel.

Item	Tea	Coffee	Ugali	Sukuma	Beaf	Rice	Fish
Price	30	50	70	35	150	80	180

Seven people went to the hotel and wanted to take lunch. Two of them took ugali sukuma and a cup of tea. Three of them took rice with beef only. The rest took ugali fish and a cup of coffee. How much in total did they pay?

- A. Sh. 1 560                      B. Sh. 1 460                      C. Sh. 1 390      D. Shs. 1 080

9. What is the simplified form of the expression

$$4(3x - y + 3) + 2(2y - x + 4)$$

- A.  $14x + 12y + 20$       B.  $14x + 8y + 20$       C.  $10x + 12y + 20$       D.  $10x + 20$

10. The fractions  $\frac{2}{3}$ ,  $\frac{3}{8}$ ,  $\frac{4}{9}$  and  $\frac{7}{11}$  are to be arranged in order from the smallest to the largest. Which is the correct order?

- A.  $\frac{2}{3}$ ,  $\frac{7}{11}$ ,  $\frac{4}{9}$ ,  $\frac{3}{8}$       B.  $\frac{3}{8}$ ,  $\frac{4}{9}$ ,  $\frac{7}{11}$ ,  $\frac{2}{3}$   
 C.  $\frac{2}{3}$ ,  $\frac{3}{8}$ ,  $\frac{4}{9}$ ,  $\frac{7}{11}$       D.  $\frac{7}{11}$ ,  $\frac{4}{9}$ ,  $\frac{3}{8}$ ,  $\frac{2}{3}$

11. Wagio fenced a rectangular plot of land that measures 80m by 60m using six strands of wire. She left the gate of five metres space. What was the length of the wire used?  
 A. 1 650m      B. 1 680m  
 C. 280m      D. 275m

12. The price of an item was reduced by sh. 420. If this was 30% discount. What was the price after the discount?

- A. Sh. 1 400      B. Sh. 140  
 C. Sh. 980      D. Sh. 1 170

13. What is the next number in the sequence 7, 11, 19, 31, 47, \_\_\_\_\_?

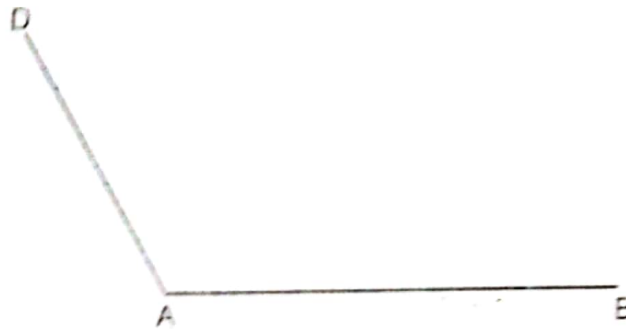
- A. 65      B. 63  
 C. 66      D. 67

14. What is the value of  $\frac{x(y+z)^2}{y+z}$

If  $x = 3$ ,  $y = 4$  and  $z = 8$

- A. 144      B. 36  
 C. 12      D. 48

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



What is the length of the diagonal AC?

- A. 5.5cm      B. 8.2cm      C. 6cm      D. 4cm

16. The marked price of a T.V set is sh. 24 000 a 20% discount is allowed on cash payment. On hire purchase only a monthly instalment of sh. 2 500 per month for one year. How much more does it cost on hire purchase than cash price?

- A. Sh. 19 200      B. Sh. 30 000  
 C. Sh. 10 800      D. Sh. 24 800

17. Three bells rings at an interval of 10min, 15min and 18 min. If they were last rung together at 8.15am, at what time will they ring together again?

- A. 9.45am      B. 10.45am  
 C. 11.30am      D. 10.30am

18. The volume of a water tank is 3.24m<sup>3</sup>. What is its capacity in litres?

- A. 32.4lts      B. 324lts  
 C. 3 240lts      D. 32 400lts

19. A sales girl earns a basic salary of sh. 18 000 per month. She is also paid 4% commission on the value of sales above 150 000. In one month, she sold goods worth Shs. 350 000. How much did she earn that month?

- A. Sh. 8 000      B. Sh. 32 000  
 C. Sh. 14 000      D. Sh. 26 000

20. The table below shows the arrival and departure times for buses from a certain company in route A to E.

Town	Arrival time	Departure
A	_____	6:30am
B	7:30am	8:00am
C	10:30am	10:45am
D	12:45pm	12:55pm
E	3:15pm	

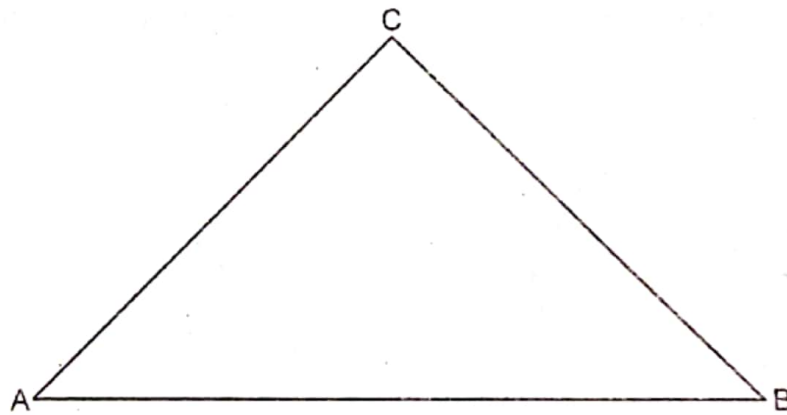
How long does it take to travel from town B to D?

- A. 4hrs 45min      B. 4hrs 55min  
C. 5hrs 15min      D. 5hrs 25min

21. Joan is five years older than her brother James. James is  $x$  years old now. Write an expression to show the sum of their ages in 10 years time.

- A.  $25 + 2x$   
B.  $2x + 10$   
C.  $5x + 20$   
D.  $5y + 10$

22. In the triangle ABC below. Construct a perpendicular bisector of line AC and line BC to meet at point X. Join X to B.



What is the length of the line BX?

- A. 3.8cm      B. 5.2cm      C. 4.3cm      D. 4.7cm

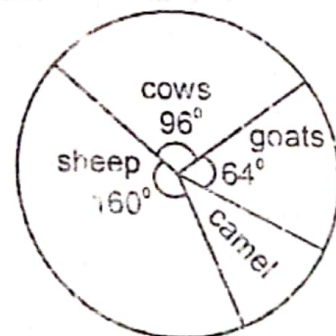
23. The mean of five numbers is 11. Four of the numbers are 12, 13, 8, and 9. What is the mode of the five numbers?

- A. 12  
B. 13  
C. 10  
D. 11

24. What is the  $\frac{3(2y + 4)}{4} - 6 = 8$ ?

- A.  $3\frac{2}{3}$       B.  $8\frac{2}{3}$   
C.  $7\frac{1}{3}$       D.  $6\frac{2}{3}$

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



If the number of cows is 384, how many more goats than camels are there?

- A. 96  
B. 256  
C. 100  
D. 416

26. The circumference of the base of an open cylinder is 132cm. What is the surface area in  $\text{cm}^2$  if the height is 20cm?

- A. 1 386 $\text{cm}^2$                       B. 27 720 $\text{cm}^2$   
 C. 5 412 $\text{cm}^2$                       D. 4 026 $\text{cm}^2$

27. Solve the inequality below.

$$12y + 9 < 36 - 4y$$

- A.  $2\frac{13}{16}$                               B.  $3\frac{3}{8}$   
 C.  $1\frac{11}{16}$                               D.  $5\frac{5}{8}$

28. Karani and Kawira shared some money in the ratio 5:7. If Kawira got sh. 2800 more than Karani. How much money did they share in total?

- A. Sh. 16 800                      B. Sh. 33 600  
 C. Sh. 14 000                      D. Sh. 19 600

29. Eric spent  $\frac{1}{8}$  of his salary on rent,  $\frac{2}{5}$  on school fees and  $\frac{3}{8}$  to buy food. She saved the rest which was sh. 5 800. How much was his salary?

- A. Sh. 58 000  
 B. Sh. 48 000  
 C. Sh. 36 000  
 D. Sh. 24 000

30. Wangila sold a bike at Sh. 9 900 making a 10% loss. At what price would he have sold it to make a 25% profit?

- A. Sh. 11 000                      B. Sh. 12 375  
 C. Sh. 13 750                      D. Sh. 8 910

31. What is the value of  $3b(a+b) + bc$

If  $a = b = 3$  and  $c = 2$

- A. 45                                  B. 87  
 C. 60                                  D. 36

32. Which of the following sets of measurement will form a right angled triangle?

- A. 3cm, 4cm, 6cm.  
 B. 10cm, 24cm, 26cm  
 C. 5cm, 13cm, 15cm  
 D. 6cm, 8cm, 12cm

33. An aeroplane flew for  $5\frac{1}{2}$  landing at its destination on Tuesday 0425hrs. At what day and time had the plane started the journey?

- A. Monday 10:55pm  
 B. Tuesday 10:55pm  
 C. Tuesday 4:55pm  
 D. Monday 4:55pm

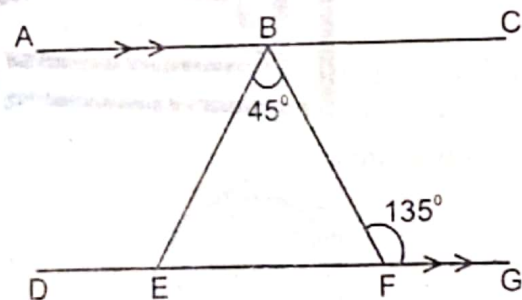
34. A section of a road 24km is represented on a map by 5cm. What is the scale used?

- A. 1:480  
 B. 1:4 800  
 C. 1:48 000  
 D. 1:480 000

35. The width of a rectangle is 35m and the length of the diagonal is 125m. What is the measurement of the length?

- A. 100m                              B. 150m  
 C. 120m                              D. 175m

36. In the figure below line ABC is parallel to DEFG.



What is the size of angle BEF?

- A.  $45^\circ$                               B.  $135^\circ$   
 C.  $90^\circ$                               D.  $55^\circ$

37. In a certain location, the population is 51 907. The number of children is 453 more than that of women. The number of women is 18 459 and the rest was men. What is the number of men?

- A. 32 905  
 B. 19 002  
 C. 18 912  
 D. 14 536

38. The table below shows the charges of sending small parcel upto 2kg.

Mass of the packel	Within East Africa	The Rest of Africa	Rest of the world
Not over 2g	29	34	48
Not over 100g	78	150	134
Not over 250g	167	194	255
Not over 500g	299	355	462
Not over 1kg	509	598	658
Not over 2kg	708	830	1 089

Donald sent the following parcels.

1.5kg to Uganda

800g to Nigeria

450g to China (rest of the world)

How much money did he pay altogether?

A. Sh. 2 209

B. Sh. 1 768

C. Sh. 3 342

D. Sh. 1 628

39. 12 men can complete a certain job in 8 days. How many more days will it take 6 men working at the same rate?

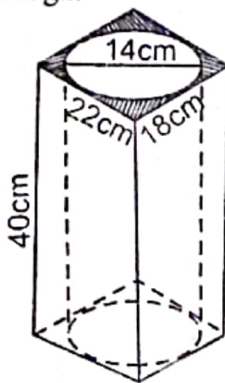
A. 16

B. 8

C. 24

D. 18

40. The diagram below show a rectangular block of wood in which a cylindrical hole has been drilled through.



What is the volume of the wood that remained after the hole was made?

A. 15 840cm<sup>3</sup>

B. 6 160cm<sup>3</sup>

C. 9 680cm<sup>3</sup>

D. 25 520cm<sup>3</sup>

41. Njoroges land is in a shape of a rhombus of sides 170m. The longer diagonal is 300m. What is the area of the piece of land?

A. 24 000m<sup>2</sup>

B. 48 000m<sup>2</sup>

C. 51 000m<sup>2</sup>

D. 25 500m<sup>2</sup>

42. A cylindrical tin has a radius of 7cm and height 8cm. How many such tins will be packed in a carton measuring 84cm by 56cm by 32cm?

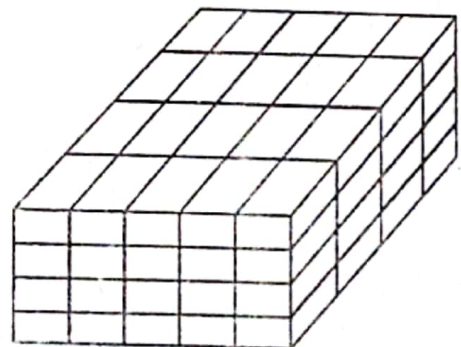
A. 24

B. 96

C. 36

D. 48

43. The figure below show a stack of cubes.



If the stack was dipped in paint, how many cubes got the paint on three faces?

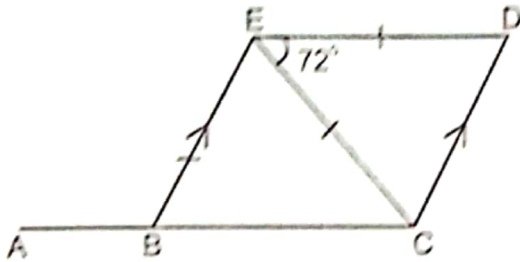
A. 80

B. 8

C. 32

D. 40

44. In the figure below line ABC is a straight line. Line ED = EC = EB. Line BE is parallel to line CD.



What is the size of angle BCD?

- A.  $117^\circ$   
 B.  $108^\circ$   
 C.  $63^\circ$   
 D.  $54^\circ$
45. Ochieng deposited Sh. 200 000 in a bank that paid simple interest at the rate of 4% per annum. How much interest did the money earn in two years?  
 A. Sh. 8 000  
 B. Sh. 208 000  
 C. Sh. 16 000  
 D. Sh. 216 000
46. Four boys shared a total of sh. 7 200 as follows:  
 James got 0.4  
 Jayden got 0.25  
 Jamlick got 0.6 of the remainder while Justin got the rest.  
 How much did Justin get?  
 A. Sh. 2 880  
 B. Sh. 1 512  
 C. Sh. 6 192  
 D. Sh. 1 008

47. Due to wearing of mask the number of breathing related cases at Mama Lucy hospital has dropped from 1700 in January 2020 to 935 in January 2021. What was the percentage decrease?

- A. 55%  
 B. 65%  
 C. 35%  
 D. 45%

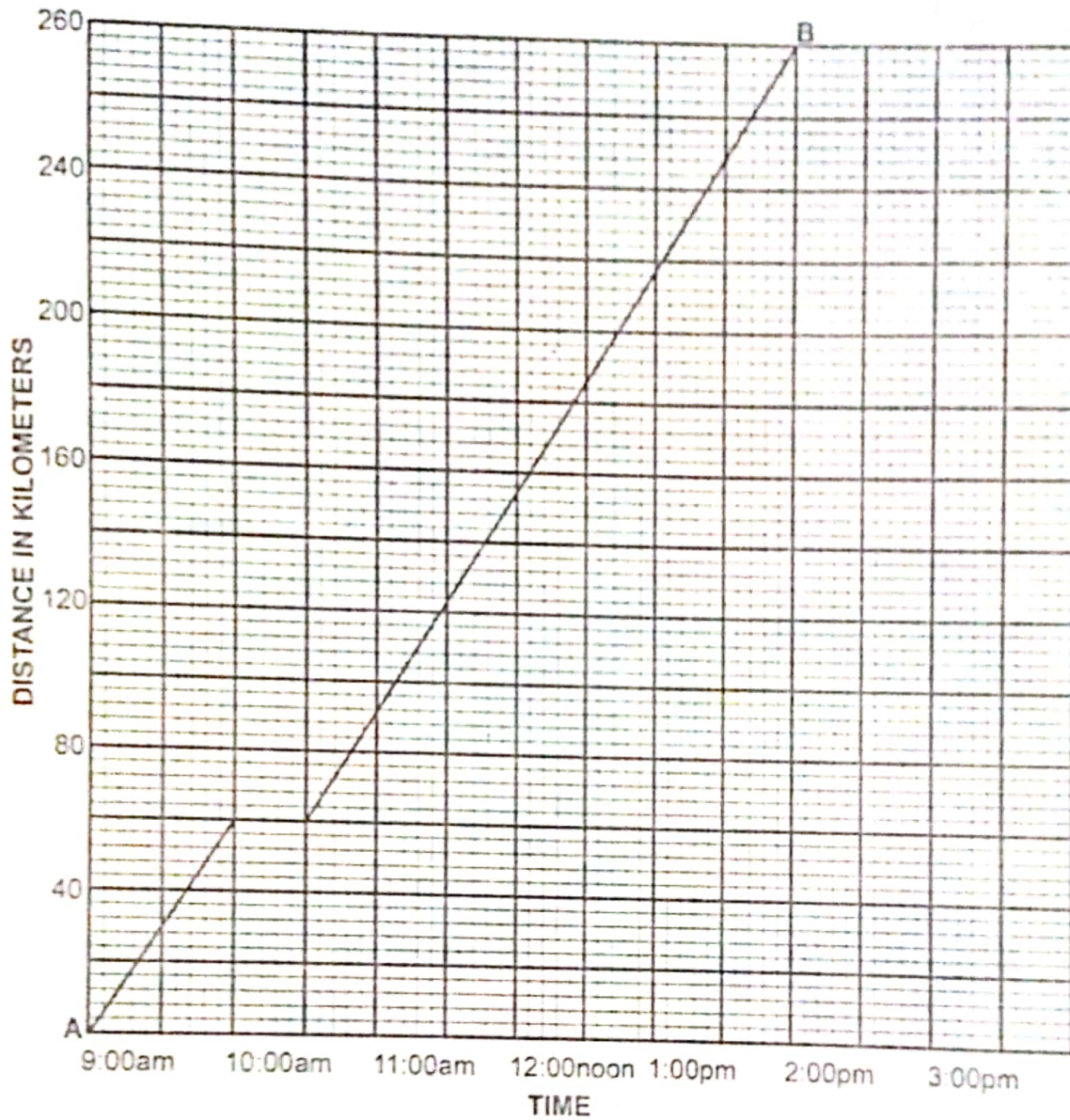
48. A teachers workshop started at 8:30am. The first session took  $1\frac{3}{4}$  followed by a 30min break. The second session took  $2\frac{1}{4}$  hours and a  $1\frac{1}{2}$  hour lunch break. The third session took 40min. At what time did the seminar end?

- A. 3:10pm  
 B. 2:30pm  
 C. 2:40pm  
 D. 2:00pm

49. What is the square root of 0.0169?

- A. 0.0013  
 B. 0.013  
 C. 0.13  
 D. 1.3

50. The graph below shows the journey by Wachira from town A to town B a distance of 260km.



What was the average speed for the whole journey?

- A. 60km/h
- B. 52km/h
- A. 72km/h
- A. 80km/h

**JESMA K.C.P.E PREDICTION WILL BE OUT ON 8<sup>TH</sup> MARCH 2021  
DON'T MISS!!!**