



MATHEMATICS

Time: 2 hours.

INSTRUCTIONS TO CANDIDATES (Please 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 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, D. In each case, only ONE of the four answers is correct. Choose the correct answer.
10. On the answer sheet, show the correct answer by drawing a dark line inside the box in which the letter you have chosen is written.

Example:

In the Question Booklet:

31. What is the value of $\frac{2(3^2 - 2^2) + 4 \times 6 \div 3}{\sqrt{81}}$?

A. $3\frac{1}{9}$

B. 4

C. $1\frac{1}{9}$

D. 2

The correct answer is **D**.

On the Answer sheet:

1 [A] [B] [C] [D] **11** [A] [B] [C] [D] **21** [A] [B] [C] [D] **31** [A] [B] [C] [D] **43** [A] [B] [C] [D]

In the set of boxes number 31, the box with letter **D** 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..

KCPE FINAL PREDICTION



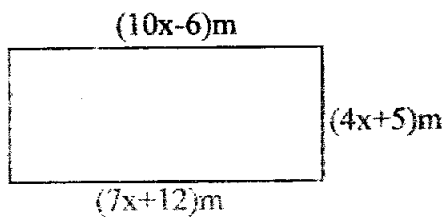
1. Write 3373000.7 in words.
 - A. Thirty three million seven thousand three hundred an seven tenths.
 - B. Three million three hundred and seventy three thousand and seven tens.
 - C. Three million three hundred and seventy three thousand and seven tenths.
 - D. Three million three hundred and seventy three thousand and seven hundredths.

2. By how many times is the LCM of 24, 48 and 72 greater than its GCD?
 - A. 12
 - B. 18
 - C. 24
 - D. 6

3. What is the total value of 5 in 37.2859?
 - A. Thousandths.
 - B. Five thousandths.
 - C. 0.0050
 - D. 0.05

4. Which one of the following statements is correct?
 - A. $2.5\text{m}^2 = 6.25\text{Ares}$
 - B. $125\text{ml} > 1.5\text{dL}$
 - C. $0.4\text{ha} > 3000\text{m}^2$
 - D. $30\text{mils} < 54\text{km/h}$

5. The figure below represents Hezrous piece of land. It was fenced round using 5 strands of wire.



- What was the length of the wire used?
- A. 425m
 - B. 650m
 - C. 570m
 - D. 830m

6. During a hockey match. 7 players scored an average of 3 goals. Three of them scored 2 goals each. Two of them scored 4 goals each. One of them scored 1 goal. All the other goals were scored by the remaining player. What was the medium number of goals?
 - A. 1
 - B. 2
 - C. 3
 - D. 6

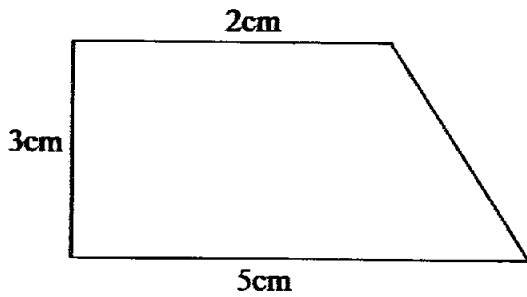
7. The perimeter of the square formed on the longest side of a right angled triangle is 169cm^2 . Which one of the following pairs are the possible measurements of the base and height of the triangle?
 - A. 3cm, 5cm
 - B. 7cm, 24cm
 - C. 6cm, 10cm
 - D. 5cm, 12cm

8. Opondo deposited sh. 50000 in a bank. After 8 months he withdrew sh. 54000 which included the interest earned. At what rate percent per annum was the bank giving the interest?
 - A. 12%
 - B. 6%
 - C. 8%
 - D. 10%

9. If $a = 4$, $b = c-3$ and $c=9$, what is the value of

$$\frac{bc - (2a + 2c) + 2}{c - a} ?$$
 - A. 25
 - B. 20
 - C. 4
 - D. 6

10. The figure below represents Sarah's piece of land. It was drawn using the scale 1:2000.



What is the size of her land in hectares?

- A. 32ha
 B. 0.42ha
 C. 0.32ha
 D. 42ha
11. A section of a road 15km long is represented by a line 0.5cm long. What is the drawing scale?
 A. 1:30000
 B. 1:300000
 C. 1:3000000
 D. 1:30000000
12. The following are properties of a certain quadrilateral
Has one pair of parallel lines
Diagonal are not equal
Interior angles adds up to 360°
Two of the interior angles are right angled
 Which one of the following quadrilateral has all of the above properties?
 A. Rhombus.
 B. Parallelogram.
 C. Trapezium.
 D. Rectangle.

13. A lorry was loaded with 150 steel iron rods, each weighing 30kg. It was also loaded with 35 bags of cement each weighing 50kg and 20 iron sheets each weighing 25kg. The loaded lorry weighed 11.775 tonnes. What was the mass of the lorry when offloaded?

- A. 5.25t
 B. 50.25t
 C. 5250kg
 D. 5025kg

14. A car took $1\frac{1}{2}$ hours to travel from town A to B. It was travelling at a speed of 60km/h. The driver took 30 minutes in town B and then travelled back to town A at a speed of 90km/h. What was his average speed for the whole journey?

- A. 60km/h
 B. 75km/h
 C. 150km/h
 D. 72km/h

15. A businessman sold an item for sh. 8750 making a profit of 25%. At what price would he have sold it in order to make a profit of sh. 3500?

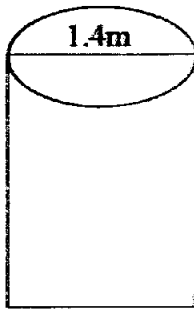
- A. sh. 7000
 B. sh. 10500
 C. sh. 2187.50
 D. sh. 9562.50

16. What is the possible value of x in the inequality?

$$\frac{x}{2} + 2(x - 4) > 2x + 4$$

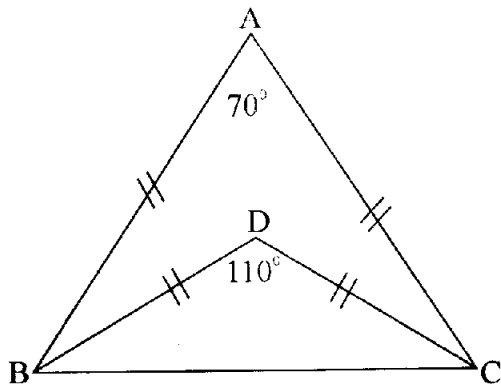
- A. 26
 B. 4
 C. 8
 D. 7

17. The figure below represents a cylindrical tank. It was third full of water.



- If it contained 3080 litres. What is the height of the tank?
- A. 2m
B. 3m
C. 6m
D. $\frac{2}{3}$ m
18. What is the place value of digit 7 after working out $7 \div 16$?
- A. Thousandths.
B. Tenths.
C. Hundredths.
D. Tens of thousandths.
19. In a ranch there were 574 goats. This was 148 less the number of sheep. The number of cows was half the sum of goats and sheep. How many animals were there in the farm?
- A. 1944
B. 1506
C. 935
D. 1296
20. A society sold 375 bags of coffee berries to broker A. This represents 15% of the number of bags they had in store. The rest were sold to broker B. How many more bags of coffee berries were sold to broker B than to broker A?
- A. 2500
B. 2025
C. 2125
D. 1750
21. A wall clock gains 5 seconds every hour. It was set right on Tuesday at 11.55am. What time did it show on Saturday the same week when the correct time was 11.55am?
- A. 11.59am
B. 12.03pm
C. 11.59pm
D. 12.05pm
22. Sixteen workers were hired to weed a farm in 15 days. 4 of them did not turn up. How much longer did the ones who remained take to complete weeding the farm?
- A. 4 days
B. 6 days
C. 20 days
D. 5 days
23. Construct quadrilateral MNOP in which line $MP = NO = 7.5\text{cm}$. Line $MN = PO = 5\text{cm}$ and angle $MNO = 90^\circ$. What is the length of diagonal NP?
- A. 9.2cm
B. 4.7cm
C. 8.4cm
D. 7.5cm
24. A train travelling from Mombasa arrived in Nairobi at 3.25am on Fridays. At what time and day had the train left Mombasa if the journey took 7 hours 40 minutes?
- A. 4.15pm on Thursday
B. 4.15am on Thursday
C. 7.45am on Thursday
D. 7.45pm on Thursday.

25. In the figure below line $AB = AC$ line $DB = DC$. Angle $BAD = 70^\circ$ and angle $BDC = 110^\circ$.

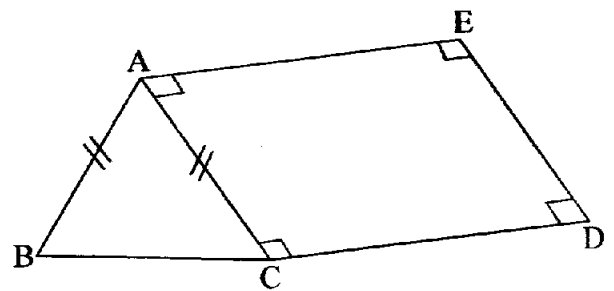


What is the size of angle ABD ?

- A. 55°
 B. 35°
 C. 20°
 D. 30°
26. The marked price of a machine is sh. 40000. When bought on hire purchase terms, one is required to pay a deposit of sh. 20000 followed by 8 equal monthly instalments of sh. 3500 per month. By what percent is the hire purchase price more than the marked price?
- A. 8%
 B. 20%
 C. 16%
 D. 10%

27. Solve the value of y in $\frac{9+y}{3} = \frac{4y-4}{2}$
- A. 3
 B. 30
 C. 10
 D. 2

28. The perimeter of triangle ABC in the figure below is 48cm. Line $AB = AC = 15$ cm. Line $CD = 16$ cm



What is the area of the figure $ABCDE$?

- A. 108cm^2
 B. 348cm^2
 C. 216cm^2
 D. 420cm^2

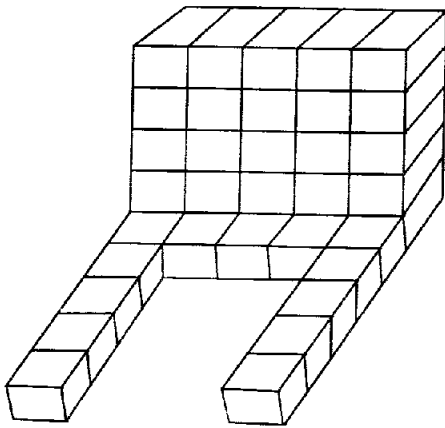
29. A salesman earns a basic pay of sh. 6500. He also gets a commission on value of goods sold above sh. 60000. In one month he sold goods worth sh. 132000 and earned a total of sh. 12500. What was his percentage commission?
- A. 25%
 B. 20%
 C. $12\frac{1}{2}\%$
 D. $8\frac{1}{3}\%$

30. What is the next number in the sequence.
 7, 16, 32, 57, _____?
- A. 93
 B. 87
 C. 82
 D. 96

31. During the last by election 4 candidates contested for MCA seat in a certain ward. The results were as follows
winner-0.52 of votes casted
2nd position - 0.21 of votes casted
3rd position - $\frac{2}{3}$ of the remaining votes
4th position - 180votes
 How many votes did the winner get?
 A. 104
 B. 520
 C. 20000
 D. 1040

32. What is $6\frac{1}{4}\%$ written as a ratio in its simplest form?
 A. 1:4
 B. 1:16
 C. 25:4
 D. 1:8

33. How many more cubes would be required to complete this stack?



- A. 150
 B. 102
 C. 38
 D. 112

34. In the year 2015, 26th December was on a Friday. On what day of the week was 6th March year 2016?
 A. Saturday.
 B. Wednesday.
 C. Thursday.
 D. Sunday.

35. Work out: $2\frac{2}{7}$ of $\left(24\frac{1}{2} \div 1\frac{2}{5}\right) \times \frac{3}{10} - 3\frac{7}{9}$

A. $9\frac{7}{9}$

B. $8\frac{2}{9}$

C. $9\frac{2}{9}$

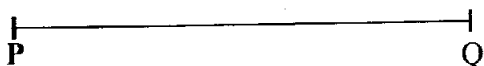
D. $8\frac{7}{9}$

36. Njiwan deposited sh. 70000 in a bank. Calculate the compound interest earned in two years if the bank gave the interest at a rate of 5% per annum?
 A. sh. 11025
 B. sh. 77175
 C. sh. 7000
 D. sh. 7175

37. Simplify the following
 $3(2y+7) - y + \frac{1}{2}(2+4y)$
 A. $8y + 22$
 B. $8y - 22$
 C. $7y + 22$
 D. $7y - 22$

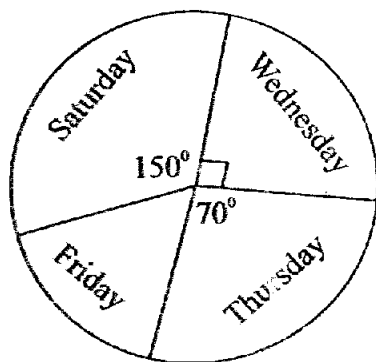
38. What is the value of $\frac{5.4 \times 4.9 \times 4.2}{2.1 \times 1.4 \times 1.8}$?
 A. 210
 B. 21
 C. 2.1
 D. 0.21

39. On line PQ drawn below construct triangle NPQ in which line NP = 7cm and angle PQN = 55°. Draw a circle touching the three vertices.



What is the radius of the circle?

- A. 4.5cm
 B. 3.5cm
 C. 7cm
 D. 8.0cm
40. The pie chart below shows the number of people who visited Nairobi ASK show in the year 2018 in 4 days.



- 840 people visited the show on Thursday.
 How many more people were there on Wednesday than on Friday?
- A. 672
 B. 1200
 C. 1800
 D. 480

41. The table below shows the number of pupils in grades 1 - 5 in a certain school.

Grade	1	2	3	4	5
No. of pupils	15%	25%		20%	30%

The information was represented on a pie chart, how many degrees represent the number of pupils in grade 3?

- A. 36°
 B. 54°
 C. 72°
 D. 10°

42. Below is a price list of some items sold in a kiosk?

Sugar – sh. 120 per kg

Bar of soap – sh. 160

2kg tin of cooking fat – sh. 170

Rice – sh. 110 per kg

Baking powder – sh. 30 per packet

Salt – sh. 15 per $\frac{1}{2}$ kg

A lady bought 2kg tin of cooking fat, Half bar of soap, $1\frac{1}{2}$ kg of sugar, 2kg of rice and 1kg of salt. She paid for the items using sh. 1000 note. How much was her balance?

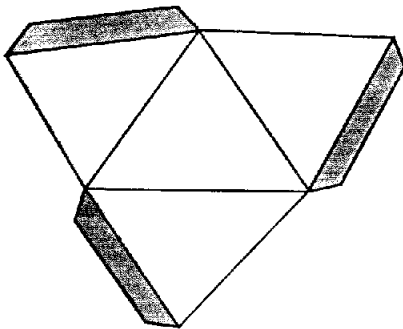
- A. sh. 680
 B. sh. 200
 C. sh. 320
 D. sh. 335

43. Arrange the fractions $\frac{18}{25}, \frac{13}{20}, \frac{11}{15}, \frac{7}{12}$ from the smallest to the largest

- A. $\frac{7}{12}, \frac{11}{15}, \frac{13}{20}, \frac{18}{25}$
 B. $\frac{7}{12}, \frac{13}{20}, \frac{18}{25}, \frac{11}{15}$
 C. $\frac{18}{25}, \frac{11}{15}, \frac{13}{20}, \frac{7}{12}$
 D. $\frac{13}{20}, \frac{7}{12}, \frac{11}{15}, \frac{18}{25}$

44. Bars of soap measuring 4cm by 4cm by 20cm are to be packed in a carton. The length of the carton is 0.8m. Its width and height measures 40cm by 60cm respectively. How many bars of soap can the carton hold?
- A. 6000
B. 60
C. 6
D. 600

45. What is the correct number of edges, faces and the vertices of the solid formed using the drawn below?



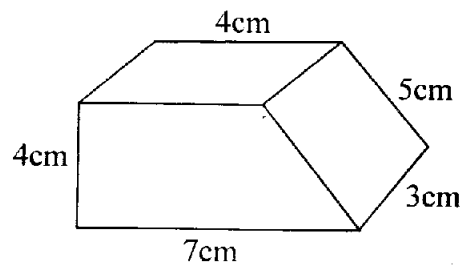
Edges	Faces	Vertices
A. 6	4	4
B. 6	5	8
C. 8	4	5
D. 12	6	5

46. A barbed wire 176m long was used to fence round a circular fish pond twice, what is the area of the fish pond in square metres (Take $\pi = 3\frac{1}{7}$)
- A. $308m^2$
B. $616cm^2$
C. $154m^2$
D. $314m^2$

47. The marked price of a water pump is sh. 15000. Ali bought it after receiving a discount of 12%. How much less would he have paid had he received a discount of 15%?
- A. sh. 450
B. sh. 2250
C. sh. 750
D. sh. 1800

48. A man is 12years older than his wife who is 20 years older than her son. The sum of their ages is 82 years. How old will the man be 5years to come?
- A. 42years
B. 47years
C. 32years
D. 37years

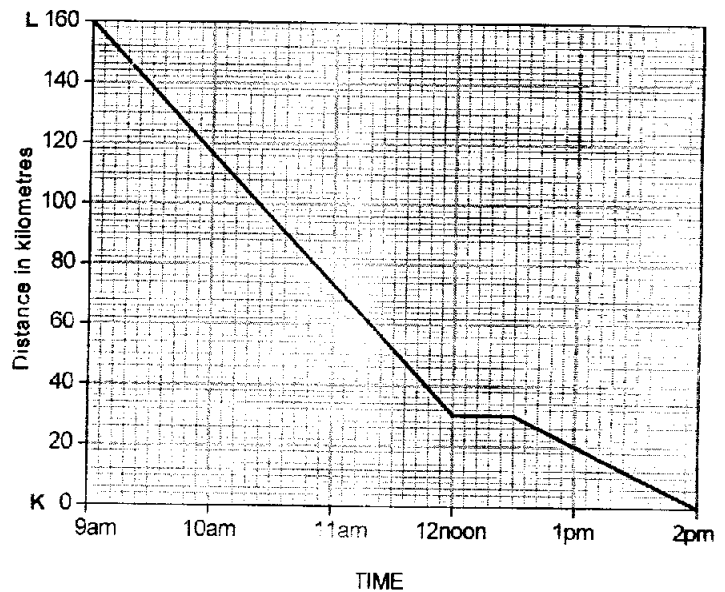
49. What is the surface area of the figure drawn below?



- A. $92cm^2$
B. $80cm^2$
C. $104cm^2$
D. $112cm^2$



50. The graph below shows the journey followed by a motorist from town L to town K.



- How many kilometres had he covered by 11.30am?
- A. 50km
B. 130km
C. 100km
D. 110km