KCPE 2001

68. Officer invested a syntage amount of money in a regimess that good ample exercise at the just of 12%; nor content At the tool of one months he would (as) the 1123 where was the universal tite interest indi-

the mumber of books is three trace that of rates. If

carried. How somen money less bu

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S. an 27

0a. Lg∂

MATHEMATICS

Time: 2 hours

READ THESE INSTRUCTIONS CAREFULLY

- 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 this 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

- 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 the sheet as clean as possible and do not fold it: start a sheet a sequely univolted and to any market
- 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 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:

- 24. The price of sugar increased from sh. 40 to sh. 50 per kg. What was the percentage increase?
 - A. 125%
 - B. 10%
 - C. 25%
 - D. 20%

The correct answer is C (25%).

On the answer sheet:



In the third set, the box with the letter C printed in it is marked.

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

This Question Paper consists of 14 printed pages and 2 blank pages.

| 1. Which one of the following | a is six million pickty file |
|--|--|
| thousand, three hundred a | and seven? |
| OF A 6085037 | HE store August EH |
| B. 6805037 | The state of the s |
| C. 6085307 | |
| D. 6850307 | 71 A |
| | |
| 2. What is 4990678 round | ded off to the nearest |
| thousand? | 265g \L |
| A. 4990000 | |
| B. 4990700 | |
| C: 4991000 D: 5000000 | |
| D. 3000000 | 1/1 |
| 3. What is the cast comban | 5 da |
| 3. What is the next number | in the pattern 2, 6, 11, |
| A. 28 | |
| B 24 | |
| C. 23 PHFI sign | un har egye will a Jismay' |
| D. 21 | A. £07 |
| | 20% |
| 4. What is the value of 0 a | 199 + 123 correct to 2 |
| decimal places? | is sairee to s |
| A 13-00 | |
| es at B. 15.80 Ja. parrique at Sun | person to a service with a leaf |
| C. 12:79 | por Aloit |
| D. 12-799 is the many | For these of words or |
| B: YSAMEN ALL | Irlegam Stag av GAL KILOVI BO NAKERC UKGEN |
| C 1 | 30-21 m A |
| D. 1 | B. di 11.50 |
| A.S. | (sh 10-35 |
| 6. What is the value of | 01. 10. 1.1 |
| $\frac{3}{4} \left(\frac{1}{2} + \frac{2}{5} + \frac{1}{3} \right) \frac{81}{185} \times \frac{3}{8} \frac{3}{8} = 0$ | 17. There were 210 blue care and 126 yellow o |
| is drawn to reprosent tills | |
| would represent the Willow | ME TRIEN DO-ZREFIGINI |
| | Teres |
| C. 11 | 10V JA |
| D. 1 19 20 | 8. 548 |
| 20 | 12 O 12 |
| 7. A shopkeeper bought 10 ca had 72 packets each of 500 a How many litres of milk shopkeeper? | ml. see bas molt sauM .81 sewere bought abyethe |
| A. 360 000 / med nutt | scored two goals less |
| B. 36 900 / | |
| 2 2 2 2 | What was their total |
| D. 360 1 | A 5n 2 B 2n-2 |
| | 2i = 112i - 32i |

- 8. What is the place value of the digit 5 in the number 4 573 261? bennet on to a sertem of yell assistant
- A. Hundred thousands

 B. Five hundred thousands the balance are already as a second se

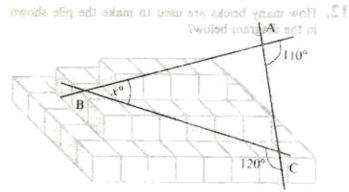
A. 35

88

85 4.0

AC (1)

- C. Millions
- D. Five millions
- 9. The diagram below shows three lines which intersect to form triangle ABC.



What is the value of x?

- A. 50°
- B. 60°
- C. 700
- D. 130°
- 10. The table below represents arrival and departure 13. Mysamburi begght & T.V. sit. times of buses from a company serving Isiolo-Nairobi route. mend a total of the 9200

| Towns | Arrival Time | Departure Time |
|----------|--------------|----------------|
| Isiolo | | 6.00 a.m. |
| Nacyuki | 8.30 a.ni. | 9.00 a.m. |
| Nyeri | 10.15 a.m. | 10.30 a.m. |
| Karatina | 11.15 a.m. | 11,25 a.m. |
| Sagana | 12.10 a.m. | 12:20 p.m. |
| Murang'a | 12.50 a.m. | 1.00(p.m.A |
| Thika | 2.45 p.m. | 3.00 p.m. |
| Nairobi | 4.00 p.m. | D 0-8485 |

How long does a bus take to travel from Nanyuki to Sagana?

- A. 3 h 50 min
- B. 3 h 40 min
- C. 3 h 20 min
- D. 3 h 10 min

C - 3n - 2五十五年 二日 11. A triangular plot measuring 7-5 metres by 12-5 metres by 15 metres is to be fenced. 1000 EVI I

If the posts are to be 2.5 metres apart, how many posts are needed? ethination bergan energia Me

O. The millions

Astron to

Peatrynki

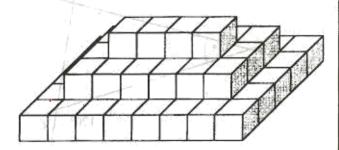
Sagama" man ik al. A

northeld &

8

· (cean arrangle ABC)

- A. 35
- B. 17
- C. 15
- D. The diagram below shows three lines white
- 12. How many bricks are used to make the pile shown in the diagram below?



alite office

- A. 62
- B. 48
- C. 28
- D. 24
- 13. Mwamburi bought a T.V. set on hire purchase terms. He paid a deposit of sh. 2000. The remaining amount was paid in 5 equal monthly instalments. He paid a total of sh. 9200.

How much was each monthly instalment?

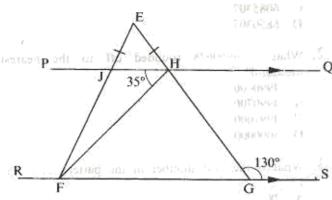
15.8 (# 2

- Towns Arrival Figge A. sh. 2240
 - B. sh. 1840
 - C. sh. 1440
 - D. sh. 400
- 14. What is the value of

| 0 · 48 × 0 · 0135 | 0.00 | Natanna |
|-----------------------|---------------|------------|
| 0.016 | ? .03 = 01.11 | Sagana |
| A. 40.5 | 12:50 a m | - Minney - |
| B. 4·05 | 2.45 p.m. | Tailo |
| C. 0.405 D. 0.0405 | 4.00 p.m. | mak |

How long does a busitake to travel from Namuel, to

15. In the figure below, lines PQ and RS are parallel. Lines EJF and EHG are straight, Lines EJ and EH are equal. Angle FHJ = 35° and angle HGS = 130°



What is the size of angle JFH?

- A. 80°
- B. 50°
- C. 45°
- D. 15°
- 16. The charges for sending an inland telegram were as

of Man to the pay of the page.

The first 10 words or part thereof sh. 10. All extra words sh. 1 each.

A commission of 15% on the total was charged.

What was the cost of sending the following telegram?

GAD KILOVI BOX 200 MALABA COME NAKURU URGENTLY NEKESA

- A. sh. 12-65
- B. sh. 11-50
- C. sh. 10-35
- D. sh. 10
- 17. There were 210 blue cars, 168 red cars, 336 white cars and 126 yellow cars in a car park.

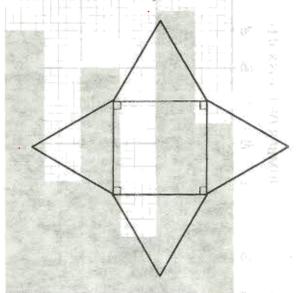
If a pie-chart was drawn to represent this information, what angle would represent the vellow cars?

- A. 90°
- B. 54°
- C. 72°
- dim loremus 01 idgeod sequezoons e
- and "I markets each of 500 au 18. Musa, Tom and Sam scored goals for their team during a football match. Musa scored n goals while Sam scored twice as many goals as Musa. Tom scored two goals less than Sam.

What was their total score?

- A. 5n-2
- B. 2n-2
- C. 3n-2
- D. 3n + 2

- 19. What is the square root of $7\frac{9}{16}$?
 - ov Marazo in sin daya. The lughess names c payages
 - B. 13
 - C. 11
 - D. 73
- 20. The figure below shows a net made up of a square and four equilateral triangles.



Which one of the following solids can be formed from this net?

- A. Square prism
- B. Triangular prism
- C. Square pyramid Whitesand Spini Conference
- D. Triangular pyramid
- 21. Flour is packed in 2.5 kg packets. If the weight of flour in the packets is increased by 25%, what would be the new weight of the packet?
 - A. 3-125 kg
 - inc Best kg and a wine other a rot 1007 in bisq in . Es
 - DETCHEL 875 kg to be new store there will all a Tho
 - D. 0-625 kg " to inmostle a navig med an
- 22. What is the value of $\frac{2s+r}{q}$, if q=4, r=2q+1 and
 - A. 5
 - 4. A laboury but. 4% Lamerer complet. 4 and gradel A . 4.
 - noma. If 12 labourers falled in norm up for r = 0 or D. 74 Trul odw went tob med runn (mar worl

to complete the job?

- Moki had 190 fifty shilling-notes. He changed sh. 6000 into one thousand shilling-notes and the rest into five hundred shilling-notes.

How many five hundred shilling-notes did he get?

- A. 9500
- В. 19
- C. 3500
- D. 7

24. On a map drawn to the scale 1:500 is a plot of land in the shape of a trapezium whose parallel sides measure 5 cm and 2 cm. The perpendicular distance between the parallel sides is 4 cm.

What is the actual area of the plot in square metres?

- A. 35 000
- 3.500 B.
- C. 350 D. 1008 350 to que abante a wolso vargão ado .@ semification of comes
- 25. Three factories Buka, Sakono and Rama produce sugar in one hundred kilogramme bags daily. Buka produces three times as much as Rama. Sakono produced two times as much as Rama.

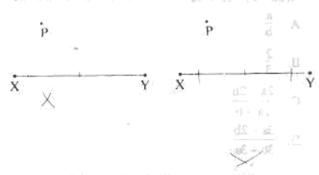
If Sakono produces 500 bags, how many tonnes altogether do the three factories produce daily?

- B. 75
- C. 150
- D. 300
- 6. A dealer paid sh. 15 000 to an agent as commission for the sale of a car. The commission was 2% of the What is the perimeter of the figure

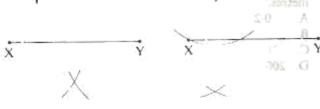
How much money did the dealer remain with from the sale of the car?

TO Par

- A. sh. 1 470 000
- B. sh. 765 000
- C. sh. 750 000
- D. sh. 735 000
- 🐠. Winda ver of the fixtowing expressions is al-27. Which one of the following diagrams shows arcs that lead to the construction of a perpendicular from point P to line XY?



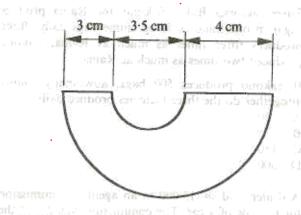
rotew in certification of the build as an incidence of A The base are of the and is 50,000 speak continucties 'अंदुक्त is the project o the tagat ा



D.

- 28. Asha deposited sh. 4800 in a bank which paid interest at the rate of 12% p.a. How much did she have in the bank after six months?
 - A. sh. 288

 - B., sh. 5088 C. sh. 5376
 - D. sh. 8256
- 29. The figure below is made up of two semi-circles joined by straight lines.



What is the perimeter of the figure?

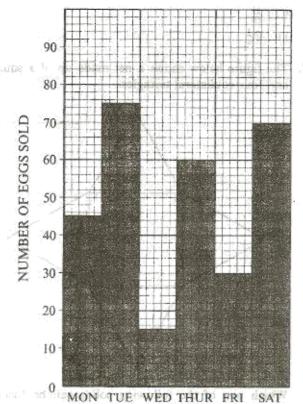
(Take
$$\pi = \frac{22}{7}$$
)

- A. 18 cm
- B. 22 cm
- C. 29 cm
- D. 51 cm
- 30. Which one of the following expressions is the simple Tiform of Attancials and world with the play about M.

$$\frac{2(a+2b)+a-4b}{4(2b-a)-5b+4a}$$
?

- 31. A rectangular tank is filled with 6 000 litres of water. The base area of the tank is 30 000 square centimetres. What is the height of the tank in metres?
 - A. 0.2
 - 2 B.
 - C. 20
 - D. 200

32. The bar graph below shows the number of eggs sold by Mutiso in six days. The highest number of eggs sold was 75.



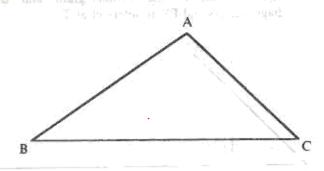
associations of a In which three consecutive days was the total number of eggs sold the highest?

- A. Tue, Wed, Thur
- B. Mon, Tue, Wed and Son boxase of more . 13
- C. Thur, Fri, Sat passoroni se castase and me surifi
- D. Wed, Thur, Frigang and to adjust was rail ad
- 33. Ali paid sh. 3700 for a radio after getting a discount of 71%. How much more would he have paid had he been given a discount of 5%? 2 it-625 leg
 - A. sh. 100
 - B. sh. 200
 - C. sh. 3800
 - D. sh. 4000
- 34. A factory hired 48 labourers to complete a job in 24 hours. If 12 labourers failed to turn up for the job, how many more hours did those who turned up take to complete the job?

 - \$3. More had been gratting enoises. He cauggood
 - tion and a constant of the contract of the con
 - D. 72

22. Wilder Stiller value is -

35. Triangle ABC, shown below, has been drawn ccurately, telamonn or it wells over it will have many laters and thinnel 2409 accurately.



What is the size of angle CAB?

- A. 35°
- B. 44°
- C. 79°
- D. 101°
- 36. Maria sat for ten subjects in an examination. Her marks in nine subjects, excluding science, was as in a follows: or a ment most good on the A . ICA

Mathematics 78, Kiswahili 81, GHC 77, Religious Education 69, English 73, Art and Craft 60, Agriculture 52, Business Education 60, and Home Science 55.

If her total marks in the ten subjects was 680, what was her median mark?

- A. 60
- Blacks in Lance of the Engineers will the
- Colors of the contract of the state of
- Diw75 has an observation of the transfer
- 37. Atieno bought 2 kg meat @ sh. 135, 1 kg sugar for sh. 48, 3 kg rice @ sh. 42 and $\frac{1}{2}$ kg salt for sh. 12. She paid for the items with a sh. 500 note.

while their.

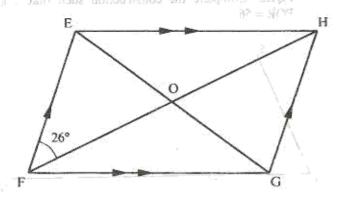
What balance did she get?

- A. sh. 456
- B. sh. 263
- C. sh. 50
- D. sh. 44
- 38. A closed cylindrical tank has a radius of 1.05 m and a height of 2 m. What is the surface area of the tank? their.

(Take $\pi = \frac{22}{7}$)

- A. 20-13 m²
- B. 16-665 m²
- C. 13:2 m²
- D. 6-93 m²

39. In the figure below EFGH is a rhombus. Angle EFO = 26°. PORS Complete the construction



What is the size of angle OGH?

- A. 128°
- 64° B.
- C. 52°
- D. 36°
- 4). The table below shows the rates for sending letters and post cards through a post office in 1998.

are Silv

45. A giter a

B: 125

D. 240

B 120

089 10

| Weight | Charge shs. cts. |
|---------------|---|
| Not over 20 g | 0914 - 00 |
| " 50 g | 17 00 |
| ,, 100 g | 18 00 |
| 250 g | 18/28/19 00 |
| wol, ⇔500 g | 46 00 |
| ,, l k | 75 00 |
| " 2 k | g 110 00 |
| Each | 10/12 - 00 |
| | Not over 20 g " 50 g " 100 g " 100 g " 1500 g " 1 kg " 2 kg |

Amina sent the following letters and post cards:

Three letters each weighing One letter weighing 150 g

One letter weighing 800 g
One letter weighing 1.5 kg

Junelles Which is the even of How much did she pay for the postage?

- A. sh. 599
- B. sh. 588
- C. sh. 564
- D. sh. 242
- 41. Kantai bought 200 chicken whose average weight was 1.5 kg. The buying price per kilogram was sh. 150. He then sold each chicken for sh. 250.

What percentage profit, to the nearest whole number, did he make? 09° A

- A. 10%
- B. 11%
- C. 67%
- D. 90%

42. Below is part of the construction of a trapezium PQRS. Complete the construction such that angle $POR = 56^{\circ}$.



What is the length of the side RS?

- A. 8.0 cm
- B. 7-3 cm
- C. 4-5 cm
- D. 3-5 cm
- 43. In a school, one bell rings after every 30 minutes while the other rings after every 35 minutes. If the two bells rang together at 8.15 a.m., at what time did they ring together next? Maire, 10 ogy

400 1

To Break

665 Hr. 7

882 35 0

D sh 242

.5a 3

555 July 1

- A. 11.45 a.m.
- B. 3.30 a.m.
- C. 9:20 a.m.s ()5 1590 3111
- D. 1.45 a.m., 00
- L tight 5 of grow 44. A circular tank of radius 1-4 metres and height 2 metres is full of water. How much water, in litres, is in the tank?

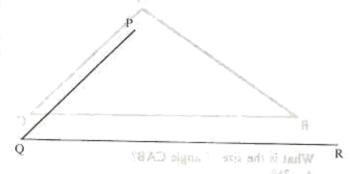
 $(Take \pi = \frac{22}{7})$

- A. 17 600
- B. 12 320
- 6.160
- strains sent the full by ing letters in 12-32
- 45. A plot of land is in the shape of a right angled triangle. The length of the longest side measures 26 metres while one of the shorter sides measures 10 metres. What is the area of the plot in square How much did she pay for the nostage! Sentom

Three letters such neighbog

- A. 60
- B. 120
- C. 130
- D. 240
- 46. In a function, the number of women was twice that of men. The number of children was half the total number of men and women. The function was attended by 270 people. How many children attended the function?
 - A. 90
 - B. 120
 - C. 180
 - D. 60

47. The diagram below is an incomplete parallellogram PQRS. Complete the parallelogram and draw diagonals QS and PR to intersect at T.



What is the size of angle PTQ?

- A. 31°
- B. 43°
- C. 106°
- Den 1379 und in en empjetes in in oxidit. De mital.
- mark, in this subjects, excluding security, was 48. A car travelling from town A to town B at an average speed of 80 km/h took 54 minutes. Another car took 40 minutes to travel the same distance. What was the difference in their speeds in km/h?
 - A. 28
- natiw C2436 a vissidak hist into na Armin Islan pad 11
- 49. The incomplete table below shows the numbers of people who attended a football match and the gate charges. The number of children is not shown:

| Sn. 133. 1 K y sug 6 to kg sud for s sic. for note | No. of people | Gate charges in ksh. |
|--|---------------|-------------------------|
| Children - | 24 | 5 |
| Students | 600 | 00 020 A |
| Female Adults | 440 | EBS .de50.E |
| Male Adults | 500 | UC |

If the total amount collected was ksh. 60 000, how "many people altogether attended the match?"

- A. 200
- B. 1000
- C. 1540 D. 1740

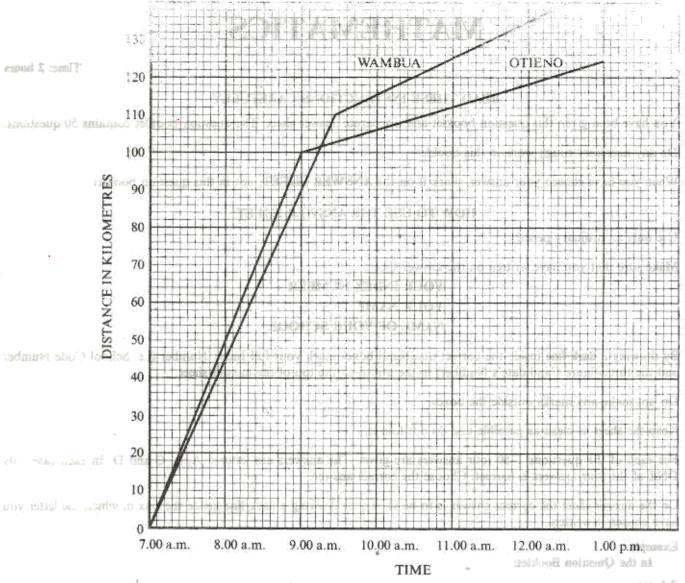
- Take m +)
- im El-Us. .A im 200-01 H

-22

Science 55

was ber median mark?

KCPE 2002 of The graph before above journeys of two spelless, Wanthus and Opere 2005 2005 and The graph before above journeys of two spelless, Wanthus and Opere 2005 2005 2005 2005 2005



24. Which one of the following to fix mallon, eighty live thousand net, Bundred and seven?

At what time was Otieno 10 km ahead of Wambua?

A 6.082 °G.

A. 10.30 a.m.

E. 6806 LB

8

B. 9.27 a.m.

ØF 185 8 €

C. 9.00 a.m.

Artesa a

C. 9.00 a.m. D. 7.12 a.m.

The 280 a) O as towards from a coff

On the mover sheet:

u g arva 🌃 o unider Ar 🌇 ica ica ar 📲 o cricer Ar 🛅 ica or la ian 🥡

In the third set, the box with the letter C proceed in R is marked.

- 13. Your dark line MUST be warm tee but
- 12. For each question tite(1) 1000 holds. It migrated in each set of lour boxes.

188 Oursten Pripe vin-late of 45 printed gages and I blank year.