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 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.
- 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:

- 44. A road measuring 3 cm on a map has an actual length of 12 kilometres. What is the scale used on the map?
 - A. 1:4
 - B. 1:400
 - C. 1:4 000
 - D. 1:400 000

The correct answer is D (1:400 000).

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)

In the fifth set, the box with the 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 15 printed pages and 1 blank page.

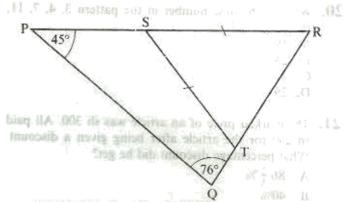
- 1. What is 399-90485 rounded off to the nearest hundredth? Some terres and reported showing to 1

 - B. 399-905
 - C. 399-90
 - D. 399.9
- 2. What is the Greatest Common Divisor (GCD) of the numbers 32, 48 and 56?

OF FIRE

- A. -8
 - B. 168
 - C. 672
- D. 86016 at mergew looses and tose
- and or weighing I be the come with least How 3. What is three million six thousand four hundred and seventy two less one thousand written in symbols?
 - A. 3599472
 - B. 3005472
 - C. 3007472
 - D. 3059472
- 14, the same below six signiful laws ABCD 4. Which is the correct order of writing the fractions
 - $\frac{3}{8}$, $\frac{5}{16}$, $\frac{11}{32}$, $\frac{13}{48}$ from the largest to the smallest?

 - B. $\frac{3}{8}, \frac{5}{16}, \frac{11}{32}, \frac{13}{48}$
 - C. $\frac{13}{48}$, $\frac{5}{16}$, $\frac{11}{32}$, $\frac{3}{8}$
 - D. $\frac{3}{8}, \frac{11}{32}, \frac{5}{16}, \frac{13}{48}$
- 5. What is the place value of the digit 7 in the number 3470268?
 - A. Thousands
 - B. Ten thousands nwal aft to aske aft as that W
 - C. Seventy thousands
 - D. Hundred thousands
- 6. In the figure below lines ST and SR are equal. Angle RPQ = 45° and angle PQR = 76° .



What is the size of angle PST?

- A. 135°
- B. 121°
- C. 118°
- D 62°

- 7. A company sold 2.5 tonnes of rice in 2-kg packets. How many packets were sold?
 - A. 125
 - B. 1250
 - C. 2500
 - D. 5000
- 8. Below is the number of tree seedlings planted by each pupil on a tree planting day:
 - 11 12 13
 - 16 8 9

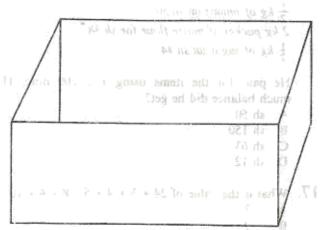
termine, many hardersonal attention and What was the mean number of seedlings planted by each pupil? # 105 THE

- A. 12½
- B. 222
- C. 1212
- D. 13
- 9. What is the value of $\frac{0.5 + 0.2 \times 4.1 0.31}{0.02}$?
 - A. 128
 - B. 60
 - C. 132-65
 - D. 50-Solm we said vinew both to death of . ??
- 10. A length of 4.6 cm on a scale drawing represents an actual length of 9200 m. What is the scale used?

near 8

(RRGO)

- A. 1:200
- B. 1:2000
- C. 1:20000
- D. 1:200000
- Moss Scottle for following cease from 5: 11. The diagram below represents an open rectangular trough.



What is the difference between the number of faces and the number of edges?

- A 7
- B. 6
- C. - 5
- D. 12

- A complainty cold 2.5 sounds of rice in 24/22 porticit **12.** What is the value of $\frac{5}{8} + \frac{1}{8} + \frac{2}{3} = \frac{3}{8}$? where we is

 - 3. Heliow is the mander of tier sequil. cash pagal on a tree planting day

42C1 R

- 13. A bag of sugar weighed 108.5 kg. Mwangi bought 16 bags. He then removed 0.3 kg of sugar from each bag. What total weight of sugar remained?
 - All 1736 kg cos to cantum upon oil saw the W
 - B. 108-2 kg
 - C. 1731-2 kg
 - D. 1735-7 kg
- **14.** What is $1\frac{1}{2}\%$ expressed as a ratio in its simplest form?

9. What a die ahm a 0 5 m 5 a n

11800C 1 E

J0000E

arioden i a

- A. 3:2
- B. 2:300
- C. 3:200
- D. 200:3
- 15. One hundred and twenty litres of juice is packed in two decilitre packets. How many packets are needed? The scale alraways and ma 7 & fo setual length at 9200 m. What is the wallower

 - B. 600
 - C. 6000
 - D. 60000
- 16. Musa bought the following items from a kiosk: ne distincte below the escite for spen instançation
 - 3 kg of tomatoes @ sh 25
 - kg of onions @ sh 30
 - 2 kg packet of maize flour for sh 38
 - kg of sugar @ sh 44
 - He paid for the items using a sh 200 note. How much balance did he get?
 - A. sh 50
 - B. sh 150
 - C. sh 63
 - D. sh 12
- 17. What is the value of $24 \div 3 + 4 \times 5 8 \div 4 \times 10 + 1?$
 - A.
 - 9 В.
 - Verse is the difference between the namble, aDisc-
- tod the number of edges?"

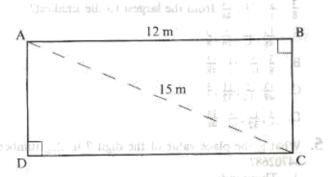
18. The table below shows the cost in shillings sending parcels through the post office.

Weight steps	Africa	Europe/ Near East	Restrof the world
Up to 1 kg	940-00	1030-00	1070-00
Over 1 kg up to 3 kg	1335-00	1390-00	1455-00
Over 3 kg up to 5 kg	1695-00	1740-00	1920-00
Over 5 kg up to 10 kg	2370-00	2380-00	2755-00

Asif sent one parcel weighing 2 kg to Africa and another weighing 3 kg 600 g to Near East. How What is three million six the Spend? and xis million while a radW

COMMENT A

- ale Arysh 3075 from hangaport source Lorest statement
 - B. sh 1335
 - C. sh 3030
 - D. sh 2380
- Children 19. The figure below shows a rectangular lawn ABCD in which AB = 12 m and AC = 15 m.



What is the area of the lawn? On while my? Sevents steedard

- A. 180 m²
- B. 108 m²
 - 36 mg #2 Lyne T.P april maled saped) sair it .0 C.
 - D.
- 20. What is the next number in the pattern 3, 4, 7, 11,

245 = 892 Janubas = 4915

- _18, ____.....2 A. 19
- B. \25
- C. 43
- D. 29
- 21. The marked price of an article was sh 300. Ali paid sh 260 for the article after being given a discount. What percentage discount did he get?
 - A. 86²/₃%
 - B. 40%
 - C. 15 5 %
 - D. 13½%

22. The figure below represents a vegetable garden bounded by two semi-circles, 5 m apart. The diameter of the larger semi-circle is 30 m.

On Thirtsday the number was 15 less than drifts Wednesday, Equal minisci of ed the centre on Freday and on so days was 108 the control in 20 patients visited the centre of Amm A

What is the perimeter of the garden? (Take $\pi = 3.14$)

Above of the curved surface of motors of . 18

B. 88:50 mr robinitys sett h. n/gent adff. Full Od I.

C. 83-50 m

D. 96.35 mp or reduction of the substantial or in the Take $\vec{x} = \vec{w}$

23. Asha was given a loan of sh 48 000. She repaid the loan after two years with compound interest at the rate of 25% p.a.

How much money did she pay altogether?

Anish 60,000 street Marata would do not helf . St B. sh 63 000 smut volvery man alice

C. sh 72 000 rator for process and an impression

D. sh 75 000

Wheat What is the square root of $1\frac{7}{9}$?

4 (400 15 da 1990 % ne j 900 25 da

her chart was drawn to represent the altornialion above if the angle representing the account the Dans

D. 3 Bullium, not service and law midw. 14., -600 601 Hs 7

B. 18 000

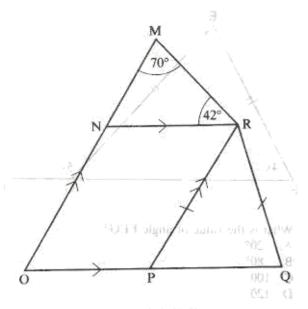
Short

000 for all G

33. A pes ish Migor town for biggeon it 1900 b in agrance on Nagroth 9 hours lines. As other close cast the for serve in Namohi?

According to a survey, three antelopes die every the months of the four are norm every minute. What the hitergray between the number of antelones tout gay, one and those that die to one day?

25. The figure below is made up of a parallelogram NOPR, triangles PRQ and MNR. Angle NMR = 70° and angle NRM = 42°



What is the size of angle PRQ?

A. 112° shopteers: fixed to 1000 pores, the

B. 68° of the to engineer tailed or entired

C. . 44°

D. 70°

A saleswoman was paid a monthly salary of sh 9000. She was also paid a commission of 10% for all the goods she sold above sh 10 000. In one month she sold goods worth sh 25 000.

What did she earn at the end of that month?

As sh 11,500, par a re tilos time business ragio

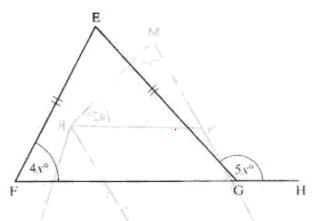
B. sh 12 500

C. sh 10 500 BOT NOM D. sh 1500 05 * 91

tigua to control to atmiss till agw cab illanto of sense to estimate out came that a torn the files

bsW.

27. In triangle EFG line EF = EG, angle EFG = $4x^{\circ}$ and angle EGH = 5x on OFT engine HPC IV The WAR states bits on



What is the value of angle FEG?

- A. 20°
- 80° B.
- C: 100°
- D. 120°
- 28. Kigen bought goods worth sh 2400. He gave the shopkeeper three sh 1000 notes. He received the balance in equal numbers of sh 200 and sh 100

What total number of notes did he receive?

- Assertance was paid a monthly subset of B. S. S. was east paid a committee of the S. S. S.
- Cache and all the state of the state and appears and a
- 1797 in draw shoos block D. 3
- 29. The table below shows the number of tonnes of sugar produced and sold by a factory in 6 days.

Days	Mon	Tue	Wed	Thur	Fri	Sat
Tonnes produced	60	25	30	20	25	15
Tonnes sold	40	70	40	30	50	25

On which day was the number of tonnes of sugar sold one and a half times the number of tonnes produced?

- A. Thur
- B. Mon
- C. Wed
- D. Sat

30. The number of patients who visited a health centre on Monday was 125, on Tuesday was 163 and on Wednesday was 210 to target togeth and to targething

On Thursday the number was 15 less than those who visited on Wednesday. Equal number of patients visited the centre on Friday and on Saturday. The total number of patients who visited the centre in the six days was 1089

How many patients visited the centre on Friday?

- A. 396
- B. 288
- C. 183
- D. 198
- 31. The area of the curved surface of a cylinder is 6160 cm2. The height of the cylinder is 10 cm.

What is the radius of the cylinder in centimetres? (Take $\pi = \frac{22}{7}$)
A = $\frac{22}{98}$ and $\frac{22}{98}$ are to make the second are selected as $\frac{23}{98}$.

- Thun punduo up ster on sale men
- C. 196
- 32. The table below shows Mwasi's income from the sale of farm produce, during one year. The information on the income for potatoes is not given.

How make draught only altogether

Produce	Wheat	Maize	Beans	Potatoes	
Income	sh 45 000	sh 36 000	sh 21 000		

A pie-chart was drawn to represent the information above. If the angle representing the income for beans was 63°, what was the income for potatoes?

- A. sh 120 000
- B. sh 18 000 -
- C. sh 17850
- D. sh 102 000
- 33. A bus left Migori town for Nairobi at 1900 h. It arrived in Nairobi 9 hours later. At what time did the bus arrive in Nairobi?
 - A. 3.00 p.m.
 - B. 3.00 a.m.
 - C. 4.00 p.m.
 - D. 4.00 a.m.
- 34. According to a survey, three antelopes die every five minutes whereas four are born every minute. What is the difference between the number of antelopes that are born and those that die in one day?
 - A: 4896
 - B. 1440
 - C: 5760
 - D. 2448

35. Construct the triangle JKL such that JK = JL = 5.5 cm and KL = 7 cm. Draw the bisector of angle KJL to meet line KL at MdT augusto to industri

ewingward bine engineer of orthogen and pawpraws Which one of the following statements is correct from the construction? It is together later of The

- Triangle JML is an isosceles triangle.
- B. Triangle JKL is right angled and
- C. Line JM is perpendicular to KL
 - D. Angle JKL = 45°.
- 36. The hire purchase price of a TV set is 40% more than the cash price. The cash price is sh 20 000. Ochieng paid sh 2100 as a monthly instalment for 10 months. and it with the per hought sode is bullowed

How much had he paid as deposit?

- A. sh 8000 112 10 lm 002 1 2000 1 1
- B. sh 13 000 to in the OOE to enter water
- C. sh 1000 the sentil and to some sent
- 7000 D. sh te sian spent th 50 on transpor
- 37. A factory hires 12 workers to complete a piece of work in 5 hours. If 2 of the workers do not turn up, how long will it take to complete the work? A. sh 356

B šh 406

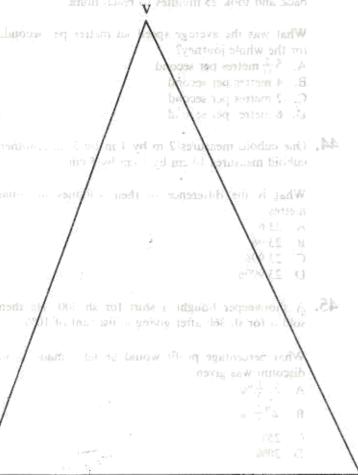
- A. 60 h
- B. 30 h
- C. 24 h
- D. 6 h
- 38. Construct a triangle XYZ such that side YZ = 6 cm, angle $YZX = 50^{\circ}$ and angle $ZXY = 35^{\circ}$

What is the length of side XZ?

- A. 8-1 cm
- B. 10-4 cm
- C. 4-6 cm
- D. 3.4 cm
- 39. Which one of the following expressions is the simplest form of $\frac{4(tq+t)+2(3q-2tq)}{2(t+q)+2q}$?
 - A. $\frac{2t+3q}{}$

40. Construct the circle that touches the sides of triangle

through the at it average appearant it works to the toltam After staying at the market for P. minutes, in applied hade and took 25 mounter to result hugan



What is the radius of the circle?

- A. 7 cm⁻
- B. 6-3 cm
- C. 3-3 cm
- D. 5-8 cm
- 41. A shopkeeper bought 5 trays of eggs at sh 120 per tray. Ten eggs broke and she sold the rest at sh 6 per

If a tray holds 30 eggs, what percentage profit did she make?

He Tipe to below represents

- A. 50%
- B. 40%
- C. 28 4 %
- D. 240%
- 42. Muli spent $\frac{3}{10}$ of his salary on food and $\frac{2}{5}$ on rent. he was left with sh 2100.

785 am

What was his salary?

- A. sh 3000
- B. sh 3675
- C. sh 4900
- D. sh 7000

43. Mambo took 30 minutes to cycle from home to the market at an average speed of 5 metres per second. After staying at the market for 20 minutes, he cycled back and took 25 minutes to reach home.

What was the average speed, in metres per second, for the whole journey?

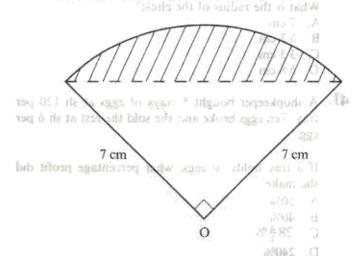
- A. $5\frac{5}{11}$ metres per second
- B. 4 metres per second
- C. 2 metres per second
- D. 6 metres per second
- 44. One cuboid measures 2 m by 4 m by 3 m. Another cuboid measures 10 cm by 8 cm by 5 cm.

What is the difference in their volumes in cubic metres?

- A. 23-6
- B. 23-96
- C. 23-996
- D. 23/9996
- 45. A shopkeeper bought a shirt for sh 300. He then sold it for sh 360 after giving a discount of 10%.

What percentage profit would be have made if no discount was given?

- A. 33 1 %
- 27 7%
- C. 25%
- D. 20%
- 46. The figure below represents a quarter of a circle centre O. The radius of the circle is 7 cm.



What is the area of the shaded part? (Take $\pi =$ Muli spent 🗎 of his salary on fmy 245 24 Aon rent.

he was felt with etc 2300

D061-31 DONE do CI

- B. 14 cm²
- C. 28-5 cm²
- D. 63 cm²

47. Sara bought pawpaws, oranges and mangoes. The number of pawpaws bought was 8 more than the number of oranges. The number of mangoes was twice the total number of oranges and pawpaws.

The total number of fruits bought was 48.

Which old of the following datements is correct

I caught 1ML is an isosocius traingle If the number of oranges was x, which of the equations below can be used to find the number of oranges bought? D. Anglé JKL ii 45°

- A. 3x + 24 = 48
- But 6x + 16 = 48 because proceed 48 = 30.
- Cite 6x + 24 = 48 and I may have sell much
- Of the Do 4x til 16 = 48 m a m 000 f its hard growth O

48. A shopkeeper bought sodas as follows:

Dizorral on boar of ben damnyessel-Two crates of 300 ml @ sh 415 Three crates of 500 ml @ sh 563 Five crates of one litre @ sh 415.

He then spent sh 50 on transport.

a relation of rest, at \$1,000m. If he had five thousand shillings, how much money did he remain with?

- A. sh 356
- B. sh 406
- C. sh 3557
- D. sh 4644

35. Construct a triangle YYZ tach that off YZ : will a XXX office one off a XXY office

VX since to ringinal are a tertific

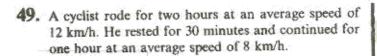
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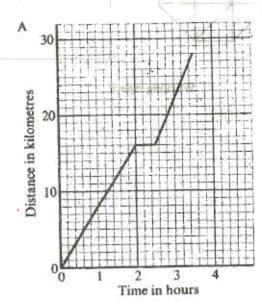
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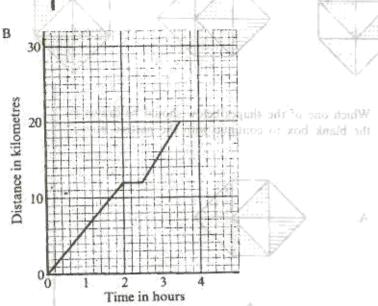
- B. 10-4 cm
- 010 deb - 5
- tres live Æ

Which me of the following expression: 148 414 - 11+21M - oul.



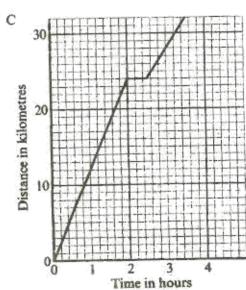
Which one of the graphs below represents the cyclist's journey?

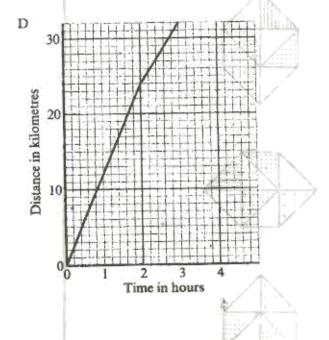




Working Space

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B.

C.

D.

