As the first diagram below constraint a permitting a mark P

## MATHEMATICS

#### MANYAM FRANCHISED TESTS

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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.
- Do any necessary rough work in this booklet.
- When you have chosen your answer, mark it on the ANSWER SHEET, not in this question booklet.

### HOW TO USE THE ANSWER SHEET

- Use only an ordinary pencil.
- 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.
- Do not make any marks outside the boxes.
- 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.
- 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

## her Example raise & to bus will the thousand aliquic burg

## In the Question Booklet: U. D. of lecturous

What is the next number in the pattern:

1.2, 2.4, 4.8

- A. 6.0
- B. 7-2
- C. 8:4
- D. 96 to below him send that advalillate.

The correct answer is D (9-6). To business of the

On the answer sheet:

29 ALLBERCHEDE 39 ALLBERCHEDE 49 ALLBERCHEDE

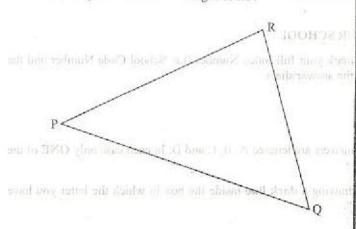
In the set of boxes numbered 9, the box with the letter D printed in it is marked.

continued with the

- 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.

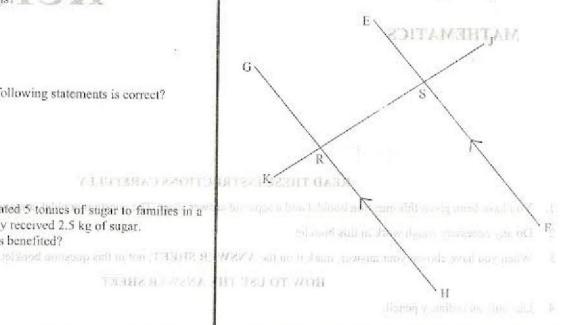
This Question Paper consists of 15 printed pages and 1 blank page.

- 1. Which one of the following numbers is twenty-six million, four hundred and thirty thousand, two hundred and nine in symbols?
  - 26432009
  - B. 2643209
  - C. 26430209
  - 264302009 D
- 2. Which one of the following statements is correct?
- A. 3 > 0.75
  - B.  $\frac{1}{2} < 0.1$
  - C. 4 < 1-3
  - D.  $\frac{2}{5} < 0.5$
  - 3. A storekeeper donated 5 tonnes of sugar to families in a village. Each family received 2.5 kg of sugar. How many families benefited?
    - A. 20 000
    - 2 000 В.
    - C. 200
    - D. 20
- On the diagram below construct a perpendicular from R to cut PQ at S. What is the length of RS?



- A. 4.9 cm
- B. 4.1 cm
- C. 5.2 cm
- D. 5.8 cm

5. On the diagram below EF is parallel to GH and JK is a transversal. Which one of the angles is equal to KRH?



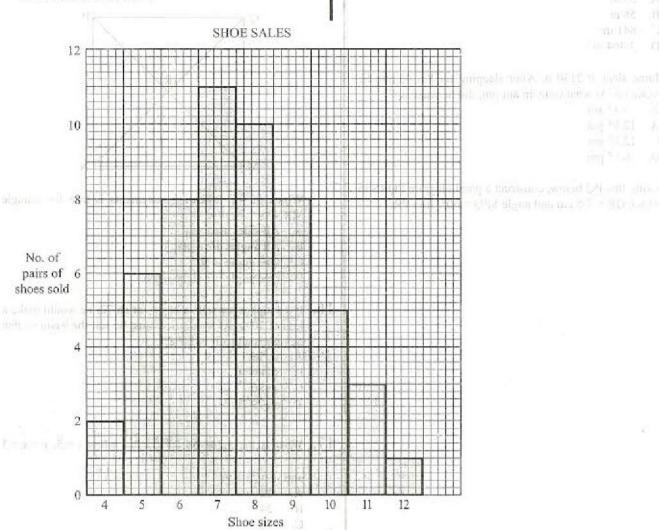
- And SRHem all an analyse went our mile store addition
- B. GRK
  - C. ESJ
- D. JSF
- 6. Mwende had mangoes. She ate 5 and shared the remaining among her 6 friends. She however found that she needed 2 more mangoes if each of the friends was to get 4 mangoes. How many mangoes had she at the beginning?
  - A. 22
  - Por each of the (pestions 1-50 four enswers 375 and
    - C. 529 of the most off own of the company of the same right
    - On the answer when the covered answer is to be
- 7. Maloba deposited sh 8 000 in a financial institution that paid simple interest. At the end of 3 years this money had amounted to sh 9 200. At what rate per annum was the simple interest awarded?
  - What is the next number in the pattern of a A
  - B. 15%
  - C. 38 ½ %
  - D. 4 \$ %
- 8. Adhiambo left home and cycled for 11 hours at an average speed of 8 km/h. She rested for 30 minutes and continued with the journey for 2 hours at an average the answer sheet: speed of  $7\frac{1}{2}$  km/h.

What was the average speed for the whole journey? A. 27 km/h

- In the set of boxes numbered 9d/ms/s/w.B the letter D protect in it is marked.
  - Vogetlark line MUST Make Tallow
- 12 For each overtien ONL A Constraint to be maded in our less to four house

This Question Paper consists of 13 printed pages and I blank page.

The bar graph below shows the number and sizes of pairs of shoes sold in one week.



M. What is procated of

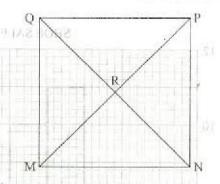
Working Space

Which size of shoe was bought most?

- A. 12
- B. 11
- C. 8
- D. 7
- 10. What is the difference between the total value of digit 3 and digit 9 in the number 6803901?
  - A. (
  - B. 2100
  - C. 3 000
  - D. 3 900
- 11. What is the value of  $\frac{6(24-18)+6\times4}{6}$ ?
  - A. 30
  - B. 25
  - C. 10
  - D. 28

- 12. What is the area of a square garden whose perimeter is 116 metres?
  - A. 29 m<sup>2</sup>
  - B. 58 m<sup>2</sup>
  - C. 841 m<sup>2</sup>
  - D. 3 364 m<sup>2</sup>
- 13. Juma slept at 2130 h. After sleeping for 8 h 45 min he woke up. At what time, in am/pm, did he wake up?
  - A. 6.15 am
  - B. 12.15 pm
  - C. 12.15 am
  - D. 6.15 pm
- 14. Using line PQ below, construct a parallelogram PQRS in which QR = 7.5 cm and angle SPQ = 60°. Join PR.

15. The figure below is a square in which the diagonals: intersect at R.



Which of the following statements is true for triangle MRN?

- A. All sides are equal.
- B. All angles are equal.
- C. One angle is 60°.
- D. One angle is a right angle.
- 1711 n ho sunq 16. If a shopkeeper sells a basin for sh 72, he would make a loss of 10%. At what price must be sell the basin so that he makes a profit of 20%?
  - A. sh 96
  - B. sh 86-40
  - C. sh 80
  - D. sh 79-20
- 17. What is the value of  $\frac{2w(x-2)^2}{2}$  when x=5, y=x+3

and 
$$w = 2x + y$$
?

- A. 12
- В. 24
- C. 136 -008 D. 144

What is the size of angle PRS?

- A. 120°
- B. 40°
- C. 30°
- D. 20°



18. Below are two graphs. One graph shows the journey by a bus from Nairobi to Nakuru. The other shows the journey by a car from Nakuru to Nairobi.

NAKURU 150 100 Distance in kilometres 50 NAIROBI 7.00 am 8.00 am 9.00 am 10.00 am 11.00 am

How far from Nakuru was the bus when the car reached Nairobi?

Time and use

- A. 115 km
- B. 90 km
- C. 60 km
- D. 35 km.
- 19. In a meeting  $\frac{3}{5}$  of the attendants were women,  $\frac{1}{4}$  of the remainder were men and the rest were children. There were 80 men in that meeting. How many children were there?
  - A. 120
  - B. 240
  - C. 480
- 20. What is the number 15.76 rounded off to the nearest tenth?

28. What is the next number in the sametice

- A. 15.7
- B. 15.8
- bna D. 20 0/ 1939 bly 08 at tunistico takinantee /
- **21.** What is the value of  $\frac{4}{5} + \frac{3}{5}$  of  $(\frac{2}{3} \frac{1}{5}) + \frac{3}{4} \times \frac{2}{5}$ ?

137

- B.  $1\frac{143}{150}$

2.2. A school commission many for a project or follows:

lined class in the school was double sometimed w

24. The raise sectors shows the number of pupils who were till dendrical to 4 in a detrain school from 2001 in 2004.

| Sidel | 7,542 | 1662 |    |       |
|-------|-------|------|----|-------|
|       |       |      | 25 |       |
|       |       |      | 13 | 2002  |
| 80    |       |      |    | £.005 |
|       | ==    | 83   |    | 2005  |

22. A school contributed money for a project as follows:

Pupils in class 1-4 contributed sh 10 each

Pupils in class 5-8 contributed sh 20 each

Teachers contributed sh 200 each

The Headteacher contributed sh 500

Each class in the school was double streamed with 30pupils per stream. The number of teachers including the headteacher was 26. How much money was contributed altogether?

- A. sh 12 700
- B. sh 15 100
- C. sh 19 900
- D. sh 20 100
- 23. The table below shows the fare in shillings for a matatu. travelling from Nairobi to Nakuru.

#### NAIROBL

| 150 | NAIVASHA |        |          |
|-----|----------|--------|----------|
| 200 | 50       | GILGIL | 11m 12k1 |
| 250 | 150      | 100    | NAKURU   |

Fourteen passengers boarded the matatu at Nairobi. Seven of the passengers alighted at Gilgil while five others boarded at Gilgil for Nakuru.

How much money altogether did the driver collect?

- A. sh 3 650
- B. sh 3 500
- C. sh 3 150
- D. sh 1900
- 24. The table below shows the number of pupils who were in standards 1 to 4 in a certain school from 2001 to 2004.

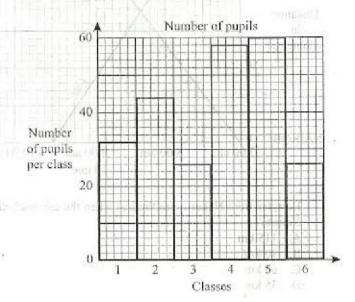
|      | Std 1 | Std 2 | Std 3 | Std 4 |
|------|-------|-------|-------|-------|
| 2001 | 79    | 73    | 59    | 55    |
| 2002 | 83    | 77    | 71    | 57    |
| 2003 | 86    | 80    | 74    | 68    |
| 2004 | -89   | 83    | 77    | 71    |

How many pupils of the class which was in Std 1 in 2001 had dropped out of that class by 2004?

- A. 24
- B. 16
- C. 10
- D. 8
- 25. Matu paid sh 7 600 for a radio after getting a 5% discount on the marked price. How much would be have paid if he had been given a 15% discount?
  - A. sh 8 000
  - B. sh 6 800
  - C. sh 6 840
  - D. sh 6 460

- **26.** What is the value of s in the equation  $\frac{s}{s} + \frac{2}{s}(s+5) = 6?$ als with art Tamala X of form X and

  - B.  $1\frac{1}{11}$
  - C.  $10^{\frac{2}{11}}$
  - D. 24
- 27. The bar graph below shows the number of pupils in six classes in a school.



What is the mean number of pupils per class?

- A. 26 a ment wolf grown today it was (% new B. 38
- C. 41
- D. 246
- 28. What is the next number in the sequence

- A. 58
- B. 56
- C. 54
- D. 52
- 29. A rectangular container is 80 cm long, 50 cm wide and 40 cm high. The container is filled with water to a level 30 cm high. What is the volume of the empty space in the container?

20. What is incommode 15.76 rounded off to

0.0%

- A. 180 000 cm<sup>3</sup>
- B. 160 000 cm<sup>3</sup>
- C. 120 000 cm<sup>3</sup>
- D. 40 000 cm<sup>3</sup>

30. A team of eleven players took lunch in a hotel, which offered food prices as shown in the table below.

|         | Ugali — | Rice  | Chips  |
|---------|---------|-------|--------|
| Beef    | sh 60   | sh 65 | sh 75  |
| Chicken | sh 75   | sh 70 | sh:100 |
| Fish    | sh 75   | sh 80 | sh 105 |

5 players each took ugali with chicken

3 players each took chips with fish

The remaining players each took rice with beef

Musa gave a one-thousand shilling note to pay for the lunch of all the players.

What balance did he get?

A. sh 55

B. sh 115

C. sh 310 maps of relating the letter of the state of the hard w

D. sh 885

31. The diagram below is a scale drawing of a plot of land drawn to the scale 1: 1500.

| -           |                   |   |           |
|-------------|-------------------|---|-----------|
| edo Parko S |                   | extraction and seams.   | 1         |
|             |                   | 27 A  | Tarili ye |
|             |                   |   |           |
| a zerve le  | partie parting 4. | A school officer only<br>thouse one favorette<br>the control paymen of<br>the cover paymen of | <         |
| Section     |                   | Management and to Exp   | <br>      |
|             |                   |   | jus .     |

What is the actual area of the plot, in m2?

Madroot e.A. rely 600,000 a semination and a series and a live

B. 90.000

C. 13 500

**32.** What is the value of  $\frac{2 \cdot 8 - 0 \cdot 5 \times 3 \cdot 2 + 3}{2}$ ?

ni balti A, to 4:2 ffw word To south 640.2 bint you all.

William and 250 and puckets. Three quarter with law of

In U.S. C. 10-5om fine abrayan Im 90% or heading the

D. 25.9

from a sale of production and the contract of

Working Space

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- 33. Sera sells goods for a company. She is paid a salary of sh 84 000 per month plus a commission of 20% for the sale of goods worth above sh 10 000. In one month her total earnings were sh 150 000. What was the value of the goods she sold?
  - A. sh 760 000
  - B. sh 340 000
  - C. sh 330 000
  - D. sh 244 000
- 34. A father shared money among his three children Mulwa, Wangare and Achesa. Wangare received sh 10 more than Achesa, while Mulwa got twice the amount Wangare got. If Achesa received sh x, which one of the following expressions represents the total amount of money given to the three children?
  - A. 4x + 30
  - B. 4x + 10
  - C. 2x + 20
  - D.  $3x \pm 30$
- 35. In a class the ratio of the number of boys to girls is 2:3. What is the percentage of the number of boys in the class?
  - A. 33± %
  - B. 40%
  - C. 60%
  - D.  $66\frac{2n}{3}n$
- 36. The diagram below is a net of a solid.



If the net is folded, which one of the following diagrams represents the solid formed?





В

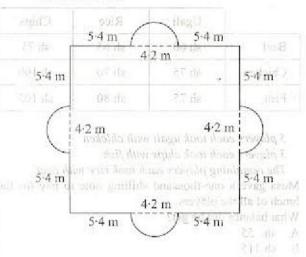
A





D

37. The figure below represents a vegetable garden consisting of a square and four semicircles each of diameter 4.2 m.



What is the area of the garden in square inerties? (Take  $\pi = \frac{22}{7}$ )

- A. I of diagram nellow is a scale diawing 5.96 pt. A.
- B. 225
- C. 252:72
- D. 335.88
- **38.** What is the difference between the L.C.M and the G.C.D of the numbers 24, 32 and 40?
  - A. 8
  - B. 472
  - C. 480
  - D. 488
- 39. A school offers only 4 games. Each pupil was asked to choose one favourite game out of the 4.
  - 0.4 of the pupils chose football
  - 0.2 of the pupils chose netball
  - 0-3 of the remaining pupils chose basketball The rest, who were 112 pupils, chose hockey

What was the total number of pupils who chose football and netball?

- A. 240
- B. 160
- C. 400
- D. 80
- 40. A saleslady had 2 240 litres of juice which she packed in 500 ml and 250 ml packets. Three-quarters of the juice was packed in 500 ml packets and the rest in 250 ml packets.

What was the total number of packets used?

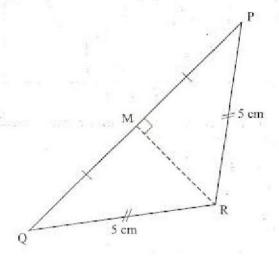
- A. 56
- B. 560
- C. 5 600
- D. 56 000

- A. 78 ½ m
- B.  $17 \pm m$
- C.  $7\frac{1}{2}$  m
- D.  $12\frac{1}{2}$  m

42. Mary bought a T.V set on hire purchase terms. She paid a deposit of sh 800 and 15 equal monthly instalments of sh 700 each. The hire purchase price was 25% higher than the cash price. Amina bought the same type of T.V set on cash. How much more than Amina did Mary pay for the T.V set?

- A. sh 2 260
- B. sh 2 825
- C. sh 9 040
- D. sh 11 300

43. In triangle PQR below, PQ = 8 cm, PM = MQ and PR = RQ = 5 cm.



What is the area of the triangle PQR?

- A.  $7 \pm cm^2$
- B. 6 cm<sup>2</sup>
- C.  $12 \pm \text{cm}^2$
- D. 12 cm<sup>2</sup>

44. Eighteen people can take 72 days to complete a piece of work. If 2 of the people did not turn up for the work, how many more days would the remaining number of people, working at the same rate, take to complete the work?

- A. 9
- B. 81
- C. 153
- D. 575

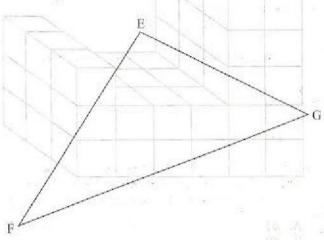
45. Pupils in classes 5, 6, 7 and 8 were to mise funds for a party. Class 7 raised sh x while class 5 raised \(\frac{1}{3}\) of what class 7 raised. Class 6 raised sh 100 less than the total amount raised by both classes 5 and 7. Class 8 raised sh 200 more than class 7. If the total amount raised was sh 6 900, which one of the following equations can be used to find the amount raised by each class?

- A.  $x + \frac{2}{3}x + 100 = 6900$
- $8 + 3x + \frac{2}{3}x = 300 = 6900$  of the value of the weight  $3x + \frac{2}{3}x = 300 = 6900$

"the dimension below?

- C.  $3x + \frac{2}{3}x + 300 = 6900$
- D.  $3x + \frac{2}{3}x + 100 = 6900$

46. On the triangle EFG below, construct the bisector of angle EFG to meet the line EG at M. Construct the bisector of angle FEG to meet the line FG at N. Mark P at the point where the two bisectors intersect.



What is the size of angle EPF?

- A. 113°
- B. 67°
- C. 48°
- D. 20°

47. What is the value of  $\sqrt{2\frac{1}{4} + 2\frac{7}{9}} \times (\frac{2}{3})^2$ ?

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

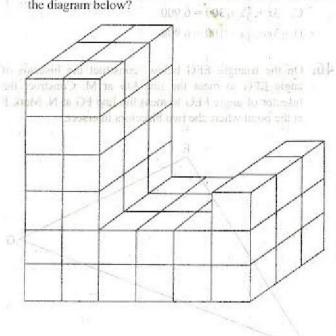
48. In year 2005, enrolment in a school was 450. In the year 2006, the enrolment decreased by 10% from that of year 2005. The enrolment increased by 20% in year 2007. What was the enrolment in year 2007?

- A. 396
- B. 486
- C. 495
- D. 584

49. A cylindrical tank of diameter 105 cm contains 485.1 litres of water. What is the height of the water in the tank?

(Take  $\pi = \frac{22}{7}$ ) and the first in the property contains

- bisatta. Freed 5.6 cmm 2 recently read yet posture infromm
- sow Brant 156 cm later will 15 T seath and broan 800 th
- Fig. C. in 224 cmm woll in all by non-finder, out order.
  - D. 1 470 cm. 20 (55 cm (20 cm) 50) both (100 a) both (100 a) cm. 25 cm.
- 50. How many blocks can be used to proke the pile shown in the diagram below?



- A. 63
- B. 60
- C. 54
- D. 36

Plant is the size of single EB4

\*\* 31

Vital icons spins of VI = 23 x 1772

5) at 5) at 5)

48. In case 2003, anothern in a school was 450, in the year 2005, the considered document by 10% (who there is year 2005. The envolument increased by 20% in year 2007. What was the considered in year 2007.

> 11, 185 t. 495 15, 584

**Working Space** 

EALS.

41. A consequence shot of fined has a confrictor on form, and looguested in Che. A wall is not constructed about one or the diagonals of the plot. What would not be become the action.

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42. Many fought of V set on hime purchase terms. Simplified depose of sh 500 and 15 equal industry institution of sh 700 such The hime purchase price was 25% higher these above visit price. Among being it the name type of T.V. act on aliast How much mene than Among did Mary may continue the contract of the contrac

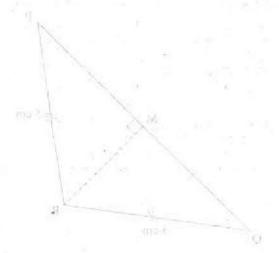
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CONTINUE &

() Let 12 1/8 1/4

00E F # 1300

43. In triangle POP below. PQ = 8 cm. PM = MO and PR = RQ = 5 cm.



What is the area of the triangle POK?

- ALC: V CHAP
- Tree 3 31
- Principle :
  - De Value

4. Undrawn people can take 72 three to complete a piece of tours. 2/3 of the people did not turn up for the work, how many more days would the remaining number of people, working of the same rate, bake to complete the work?

- Q A
- 12 3
- 623
- D 575

34