

PRE- K.C.P.E TRIAL

STANDARD EIGHT - YEAR 2022



MATHEMATICS

NYERI COUNTY

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 paper.

HOW TO USE THE ANSWER SHEET.

4. Use an ordinary pencil only.
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

18. What is the mean of the following numbers 12, 6, 8, 4, 10, 11, 7?
- A. 8
B. 4
C. 8.5
D. 16

The correct answer is C

On the answer sheet:


3. [A] [B] [C] [D] 4. [A] [B] [C] [D] 18. [A] [B] [C] [D] 25. [A] [B] [C] [D]

In the set of boxes number 18, the box with letter C 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.

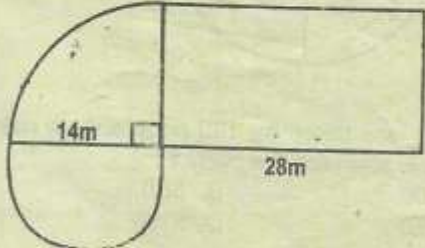
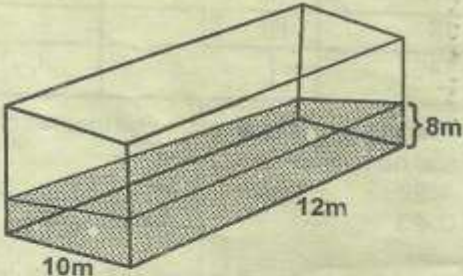
This question paper consists of 8 printed pages.

TURN OVER

1. What is **30, 303, 333** written in words ?
 A. Thirty million three hundred and thirty three thousand three hundred and thirty
 B. Thirty million , three hundred and three thousand three hundred and thirty three
 C. Three million three hundred and three thousand three hundred and three
 D. Thirty million three hundred thousand three hundred and thirty three hundred
2. Given that $a=10$, $b=16.3$ and $c=3.7$, what is the value of $\frac{b+c}{a}$?
 A. 2
 B. 4
 C. 0.86
 D. 0.43
3. The area of a square plot of land is 2601 m^2 . What is its perimeter ?
 A. 51 m
 B. 102 m
 C. 650 m
 D. 204 m
4. Mumbi had y shillings , Miriam had 10 shillings more than Mumbi. If both of them had a total of sh 120. How much money did Miriam have?
 A sh 55
 B. sh 110
 C. sh 65
 D. sh 75
5. Work out the following and give your answer in decimal
 $1\frac{1}{2} + 5\frac{3}{4}$
 A. $6\frac{1}{4}$
 B. 68.75
 C. 6.875
 D. $7\frac{1}{4}$
6. Simplify the inequality
 $0.7r + 0.3 > 49.3$
 A. $r < 70$
 B. $r > 7$
 C. $r < 7$
 D. $r > 70$
7. An empty pick - up weighs 1.3 t. It was loaded with 40 cartons and in each carton , there were 20- 500g packets of cooking fat. If the mass of each empty carton was 25g, what was the total mass of the loaded pick - up in tonnes ?
 A 1.71 t
 B. 1.34 t
 C. 1.701 t
 D. 1.321 t
8. Waiganjo borrowed sh 15000 from a lending financial institution that charged a compound interest rate of 10% p.a. How much did he pay back after two years ?
 A. sh 18000
 B. sh 18150
 C. sh 3000
 D. sh 15250
9. A watch loses 5 seconds for every hour. It was set right on Wednesday at 12.20 pm, what time will it show on Saturday at 12.20 pm ?
 A. 12.14 pm
 B. 12.26 am
 C. 12.26 pm
 D. 12.14 am
10. Kosgey bought two trousers for sh1584 after getting 12% discount .Calculate the marked price of each trouser ?
 A. sh 1800
 B. sh 696
 C. sh 1394
 D. sh 900
11. The capacity of a cylindrical tank is 138.6L. If it has a radius of 42 cm, how deep is the tank?
 A. 2.5 cm
 B. 250 cm
 C. 25 cm
 D. 50 cm
12. The circumference of the figure below is 66 cm. Calculate the diameter

 A. 14 cm
 B. 28cm
 C. 7 cm
 D. 56 cm
13. The boundary between two sub counties on a map measures 16 cm. If the actual distance is 24 km, what is the scale used on the map in ratio form?
 A. 1 : 150000
 B. 1 : 15000
 C. 1 : 1500
 D. 1 : 150
14. A church has 675 adult members. The ratio of men to women is 4 : 5. What is the number of men in the church?
 A. 540
 B. 375
 C. 300
 D. 337

15. The price of a coffee table was sh 3500 . If the price was increased in the ratio of 5 : 2, what was the increase in shillings ?
 A. sh 8750 B. sh 2500
 C. sh 1400 D. sh 5250
16. Five ladies can make 300 chapatis in one hour. How many more such chapatis can six ladies make in one hour ?
 A. 360 B. 60
 C. 50 D. 250
17. A trader had 350 trays of eggs .He sold 70 trays on a certain day. What is the percentage decrease in the number of trays ?
 A. 20% B. 80%
 C. 25% D. 75%
18. What is the difference between the total value of digit 6 and 9 in 623940 ?
 A. 591000
 B. 599100
 C. 600 900
 D. 699100
19. Work out

$$\frac{(2.72 \div 2) \times (1.11 + 0.81)}{0.34 \times 4.8}$$

 A. 16 B. 1.6
 C. 160 D. 0.16
20. What is the sum of the next 2 numbers in the sequence
 0, 2, 5, 10, 17, _____, _____
 A. 69 B. 3
 C. 17 D. 28
21. A school has 840 pupils. One day 42 pupils were absent .What fraction of the pupils were present on that day ?
 A. $\frac{1}{20}$ B. $\frac{17}{20}$
 C. $\frac{3}{20}$ D. $\frac{19}{20}$
22. An open cylindrical water tank has a diameter of 40 m and a height of 25 m. Find its total surface area ?($\pi = 3.14$)
 A. 5652 B. 6594 m²
 C. 4082m² D. 4396 m²
23. Calculate the total length of the wire that is required to fence the piece of land drawn below using one strand of wire
- 
- A. 103 m B. 114 m
 C. 86 m D. 100m
24. The figure drawn below is a rectangular water tank that is a quarter full of water
- 
- How many cubic metres of water are required to make the tank full ?
 A. 2880 B. 3840
 C. 1920 D. 960
25. A phone dealer bought two phones at sh 7000 and paid sh 200 for transport to his shop. Later he sold the phones at sh 6745. What was his percentage loss ?
 A. 3.6% B. 0. 8%
 C. 5.0% D. 6. 5%

26. The pie cart below shows the favourite beverages during a wedding party



If tea was taken by 180 people, how many people attended the party?

- A. 900
B. 360
C. 720
D. 1080

27. The table below shows the size number of shoes worn by 20 pupils in a std 8 class

Size No	Tally marks	Total
9		2
10		2
11		7
12		8
13		1

Find the sum of the mode and median of the size numbers

- A. 22
B. 24
C. 23
D. 15

28. Amal is 0.02 hectometres tall. Juma is 18 decimetres tall and Dawin is 0.03 decametres taller than Amal. Find the sum of their height in metres

- A. 5.9 m
B. 4.1m
C. 3.8 m
D. 6.1 m

29. Nyakio sold 5 piles of mango at sh 200 per pile. If she make a profit of 25% , what was the buying price of each mango if he had bought forty mangoes?

- A. sh 22. 50
B sh 24. 00
C sh 5.0
D. sh 25. 00

30. Maina bought the following items from a certain shop

2 - $\frac{1}{4}$ kg of sugar @ sh 80 per kg
6- 500 g packet of soya powder at sh 100
3 litres of cooking oil for sh 600
3 - 1 litre bottle of juice at sh 100

If she gave the shopkeeper 4- five hundred shilling notes, how many twenty shilling coins did she receive as balance ?

- A. 34
B. 17
C. 23
D. 1

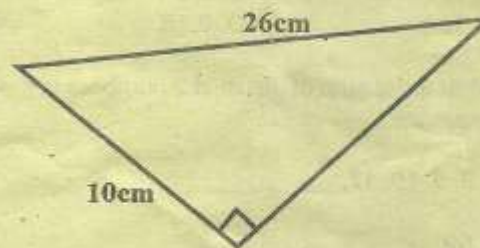
31. Kamau a rectangular piece of land that was 120 m long. He planted flowers round the land at an interval of 10 m apart. How many flowers did he plant if the width as 20 m less than the width?

- A. 44
B. 22
C. 23
D. 45

32. Construct triangle ABC with $AB = 8$ cm , $BC = 5.5$ cm and angle $ABC = 55^\circ$. Measure AC

- A. 6.7 cm
B. 7 cm
C. 6 cm
D. 8 cm

33. Find the missing length in the triangle below

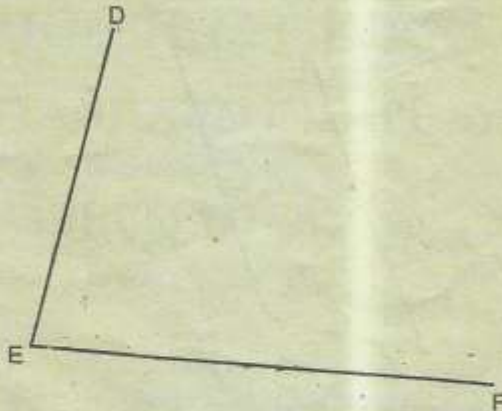


- A. 13 cm
B. 12 cm
C. 24 cm
D. 30 cm

34. What is the product of the edges and vertices in a triangular based prism ?

- A. 45
B. 30
C. 24
D. 54

35. Complete the parallelogram DEFG below



Measure diagonal EG

- A. 11.8 B. 10.4cm
C. 12 cm D. 14 cm
36. Solve the following equation
- $$\frac{b-2}{3} + \frac{3b+6}{4} = 4$$
- A. 3 B. $3\frac{11}{13}$
C. $2\frac{12}{13}$ D. $4\frac{11}{13}$
37. Moses and James ate $\frac{3}{4}$ of a loaf of bread. If they left the remaining part for Peter, what percentage of loaf did Peter eat?
- A. 75% B. 34%
C. 43% D. 25%
38. Work out:
- $$\frac{1}{7} \text{ of } (4\frac{1}{12} \div 4\frac{3}{10}) + 7\frac{3}{5}$$
- A. $17\frac{141}{210}$ B. $7\frac{151}{210}$
C. $17\frac{131}{210}$ D. $17\frac{61}{210}$
39. What is the place value of 4 in 96.1042?
- A. Thousandths
B. Hundredths
C. Tens of thousandths
D. Thousands

40. A square floor of length 5 metres is to be covered with square tiles of length 20 cm. How many tiles are needed to cover the whole floor?

A. 25 tiles B. 100 tiles
C. 625 tiles D. 525 tiles

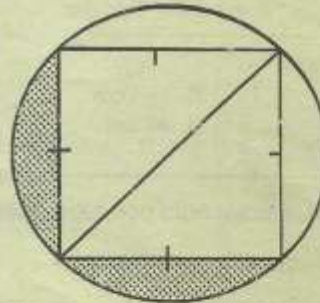
41. After spending 30% of her salary, Hamisi remained with sh 10 500 .How much was his salary?

A sh 7000 B. sh 10800
C sh 24000 D sh 15000

42. Hamisi's brother woke up on Sunday at 5: 24 am after sleeping for $8\frac{1}{3}$ hours. At what time and day did he sleep ?

A. Saturday 9 : 40 pm
B. Sunday 9: 04 pm
C. Sunday 9 : 40 am
D. Saturday 9: 04 pm

43. The figure drawn below shows a square drawn inside a circle with a diameter of 28 cm. Find the area of the shaded part

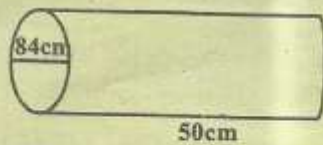


A. 20 B. 112
C. 210 D. 224

44. The hire purchase of a fridge include a deposit of sh 6400 and a monthly installment of sh 730 for a period of twenty months. If the marked price was 20% less than hire purchase, find the marked price

A. sh 16800 B. sh 26250
C. sh 17500 D. sh 14000

45. What is the capacity of the figure below in decilitres ?



- A. 2772
B. 2772000
C. 27.72
D. 277.2

46. Kips company was paying 25% commission to its agents for any sales they make above sh 6000 every month. If an agent sold goods worth sh 25000, how much was his commission ?

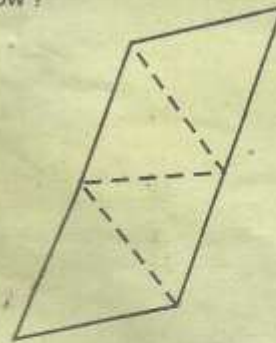
- A sh 6250
B. sh 1500
C. sh 7750
D. sh 4750

47. Work out the perimeter of the figure below



- A. 192 cm
B. 186 cm
C. 294 cm
D. 93 cm

48. Which solid can be made from the net drawn below ?



- A. Square based pyramid
B. Triangular based prism
C. Square based prism
D. Triangular based pyramid

49. Which one of the following statements is false about a rhombus?

- A. Diagonals are perpendicular bisectors
B. Opposite angles are equal
C. All angles are equal
D. All angles add up to 360°

50. Drop a perpendicular from point X to meet line QR at t. Measure QR

X•



- A. 5 cm
C. 4.2 cm

- B. 10 cm
D. 5.6 cm