K.C.P.E PREDICTION

STANDARD EIGHT - YEAR 2022

MATHEMATICS

TIME: 2HRS

READ THESE INSTRUCTIONS CAREFULLY

1. You have been given this question paper and a separate answer sheet. The question paper contains 50 questions
2. Do any necessary rough work in this paper.
3. When you have chosen your answer, mark it on the **ANSWER SHEET**, not in this 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 (ie. 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

15. Express 12½% as a fraction

A. ¼ B. $^1/_8$ C. 12½ D. $^1/_{25}$

The correct answer is **B**

1. [A] [B] [C] [D] **10.** [A] [B] [C] [D] **15.** [A] ~~[B]~~ [C] [D] **20.** [A] [B] [C] [D]

In the set of boxes numbered **15** the box with letter **B** 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 6 printed pages

TURN OVER

1. What is 5505008.27 in words?
   A. Five hundred and fifty million five thousand and eight and twenty seven.
   B. Five million five hundred and five thousand and eight and twenty seven hundredths.
   C. Five million five hundred and five and eight and twenty seven thousandths.
   D. Five million five hundred and five thousand and eight point two seven.
2. How many groups of hundreds are in the total value of digit 9 in the number 89450?
   A. 9 B. 90
   C. 900 D. 9000
3. What is 79.9869 rounded off to the nearest hundredths?
   A. 79.99 B. 80.00
   C. 79.98 D. 80.99
4. What is the value of $5(4^2 - 2^2) + 24 \div 4$?
   A. 21 B. 26
   C. 66 D. 82
5. What is the value of x in the equation $3x + \frac{1}{3}(x-3) = 5$
   A. 1.5 B. $1\frac{1}{3}$
   C. $1\frac{4}{5}$ D. 2
6. In Chereras farm, the ratio of cows to goats is 5:3 while the goats to sheep is 4:7 if she has 21 sheep. How many animals are on the farm?
   A. 53 B. 41
   C. 33 D. 32
7. Mama Jane bought the following items from a shop.
   3kg rice @sh. 120.
   8rolls of tissue for sh.200.
   3 bars of soap @135.
   3 packets of milk.
   If she gave the shopkeeper 3-five hundred shilling note and got a balance of sh.355. What was the price of each packet of milk?
   A. sh. 60 B. sh.70
   C. sh.210 D. sh. 180
8. What is the value of $3 + \frac{1}{4}y < 5 - y$
   A. $y < 5 \div 8$ B. $y > 3$
   C. $y < 3$ D. $y < 1\frac{3}{5}$
9. The floor of a square room is covered completely by four equal square carpets. The area of each carpet is $3\frac{22}{49}m^2$. What is the length of one side of the room in metres?
   A. $1\frac{6}{7}$ B. $3\frac{5}{7}$
   C. $6\frac{4}{9}$ D. $7\frac{3}{7}$
10. What is the next number in the pattern?
    $3\frac{5}{8}, 3\frac{1}{2}, 3\frac{3}{8}, 3\frac{1}{4}, 3\frac{1}{8}, \_\_\_\_\_$
    A. $3\frac{1}{8}$ B. $3\frac{3}{8}$
    C. 3 D. $\frac{3}{8}$
11. An aeroplane took 3hrs 15minutes to travel from Brazzaville to Mombasa. If it reached Mombasa 0200h on Monday, at what time had it left Brazzaville?
    A. 1045h on Monday
    B. 1045h on Sunday
    C. 2245h on Monday
    D. 2245h on Sunday
12. A trader sold an item for sh. 1800 making a loss of 10%. How much would the trader have sold the item to get a profit of 20%?
    A. sh. 1980
    B. sh. 2000
    C. sh.2160
    D. sh.2400
13. Construct triangle XYZ in which XY=7.8cm YZ=6cm and XZ= 5.5cm. What is the size of the supplement of angle XYZ?
    A. 45° B. 95°
    C. 130° D. 135°
14. In a hall there are 60 benches. Each bench can accommodate 6 adults or 10 children. If half of the benches are occupied by children and the rest by adults, how many people are seated in this hall?
    A. 300 B. 360
    C. 480 D. 600
15. What is the value of
    $\frac{3}{4}(\frac{1}{2} + \frac{2}{5} + \frac{1}{3}) - \frac{1}{5} \times \frac{3}{8}$?
    A. $1\frac{1}{5}$ B. $\frac{2}{5}$
    C. $\frac{37}{40}$ D. $1\frac{19}{20}$

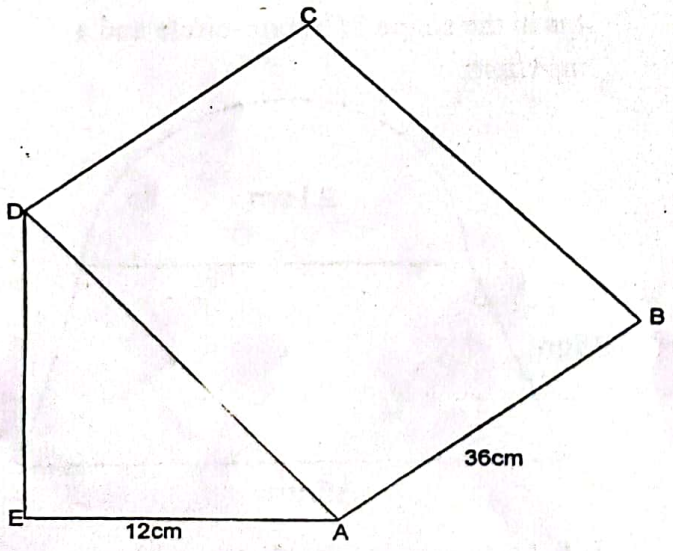
16. The total number of learners enrolled in schools in a location in a certain county was 48000. In a pie chart the number enrolled in secondary schools was represented by an angle of 120°.while that in the primary schools was represented by 150°. The rest were enrolled in the pre-primary schools. How many more learners were enrolled in primary schools than in pre-primary schools?
A. 12000 B. 8000
C. 20000 D. 16000

17. Three bells ring at intervals of 30minutes, 40minutes, and 48minutes. The bells rang together at 12:30pm, what time in 24hour clock system will they ring together next?
A. 2030h B. 0830h
C. 1630h D. 0430h

18. During an election candidates **X**, **Y** and **Z** contested for a seat. The number of voters who voted for **Y** was 700, which was 0.35of the total votes, out of the remaining votes, **Z** received 0.03 votes more than **X**. How many more votes than **X** did the winning candidate get?
A. 680 B. 620
C. 80 D.60

19. A road measuring 7cm on a map has an actual distance of 21km. What is the scale used in drawing the map?
A. 1:3000000 B. 1:300000
C. 1:30000 D.1:3000

20. The figure below represents a solid in which **EA**=12m and **AB**=36 m. Angle **DEA** is a right angle. The distance from **A** to **D** is 15m.



What is the surface area of the figure?
A. 972cm² B. 1080cm²
C.1512cm² D. 1404cm²

21. Nelson bought 2x oranges while mercy bought 4y oranges. Hellen bought two more than half the total number of oranges bought by both Nelson and Mercy. How many oranges did they buy altogether?
A. 3x + 6y + 2 B.4x + 8y + 2
C.6x + 12y + 2 D. 3x + 6y + 2

22. A saleslady earns a basic salary of sh.40000 she is also paid a commission of 2 $^1/_2$% of the value of goods she sales above sh. 100000. In one month she sold 20000 items at sh. 50 each. What was the total earnings that month?
A. sh.42500
B. sh.62500
C. sh.65000
D. sh.67500

23. What is $^3/_7$ (21x + 42y) + $^5/_6$ (18x -18y) expressed in its simplest form?
A. 6x + 3y B. 24x + 3y
C. 24x - 3y D. 24x + 33y

24. A rectangular field measure 120m by 80m. The field was to be fenced leaving a space 5metres for the gate. If the posts were placed 5metres apart. How many posts were used for fencing?
A.70 B.80
C.81 D. 82

25. A charitable organisation supplied a children's home with 80 cartons of milk. Each carton contained 60 two- hundred and fifty millilitres packets of milk. How many litres of milk were supplied?
A. 1200000 B. 12000
C. 1200 D. 120

26. Wafula pays sh. 300 for his transport, sh. 400 for his two sons and sh. 250 for his sister daily. If the fare increased by 20%, how much will he spend in six days?
A. sh. 950
B. sh.1140
C. sh.5700
D. sh. 6840

27. A rectangular brick weighs 3kg 750g. How many such bricks can be loaded into lorry which can carry 22.5 tonnes?
A.6 B.60
C. 600 D. 6000

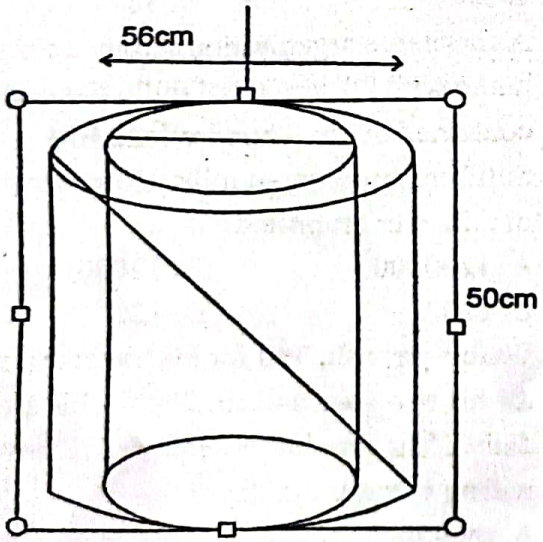
28. A fruit vendor sold $^{2}/_{5}$ of fruits to motorists and ¼ to pupils. He also sold $^{3}/_{7}$ of the remaining fruits to parents. If the vendor was left with 168 fruit, how many fruits were left to pupils?
A. 126 B. 210
C. 336 D. 840

29. The hire purchase price of a T.V set is 25%more than the cash price. The cash price is sh. 30000. Achieng paid sh. 2500 as a monthly instalment for 10 months. How much had she paid as a deposit?
A. sh.37500 B. sh.12500
C sh. 7500 D. sh. 5000

30. Construct a parallelogram PQRS such that line PQ = 3.5cm, line QR = 6.5cm and angle PQR = 60°. What is the measure of the length of the shorter diagonal?
A.5.7cm B. 6.5cm
C. 8.7cm D.10.0cm

31. Nine men can complete a piece of work in 15 hrs. How many more hrs did it take them to complete if three men did not turn up?
A. 7 ½ hrs B. 5hrs
C. 22 ½ hrs D 30hrs

32. The figure below shows a cylindrical log of wood. A cylindrical hole of radius 14cm is made through the wood as shown.



What is the volume of the remaining log of wood?
A.123200cm³ B.92400cm³
C.30[illegible] D. 69300cm³

33. What is the value of
$\frac{0.5+0.2\times4.1-0.3}{0.04}$?
A. 64.25 B. 3.1
C. 66.325 D. 25.5

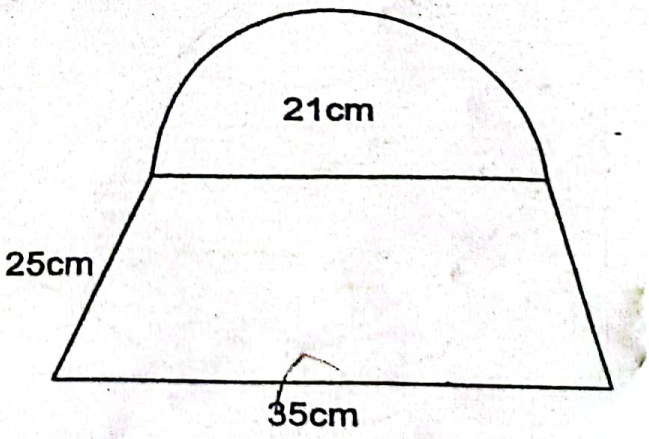
34. The perimeter of a rectangular plot of land is 60.98m. If the width of the plot is 9.6m. What is its length?
A. 51.38m B. 41.78m
C. 25.69m D. 20.89m

35. The table below shows bus fare from town A to G.

A						
50	B					
100	30	C				
170	50	50	D			
180	100	80	50	E		
200	120	100	70	50	F	
250	150	120	80	80	50	G

Joseph left with his 3 children from A to G vie E one child was left in town E and he continued with the rest. How much did he pay if children paid half the fare of the adult?
A. sh.600 B. sh. 610
C. sh.625 D. sh.650

36. The figure below represents a flower garden. It is in the shape of a semi-circle and a trapezium.



What is the area of the flower garden?
A. 672cm² B. 693cm²
C. 845.25cm² D. 866.5 cm²

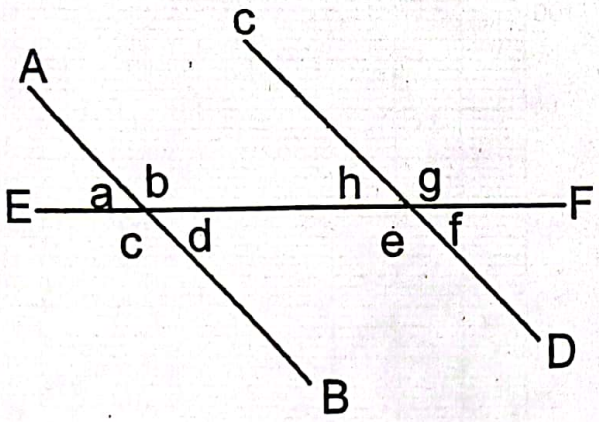
37. A man deposited shs. 60000 in a bank for 2 years. The bank paid compound interest of at the rate of 10% per annum. How much money was in his account at the end of two years?
A. sh. 66,000 B. 66,600
C. 12,600 D.72, 600

38. What is the value of $\frac{2x^2-y+z}{z-y}$?
when $x=4$, $z=y+2$ and $y=x-1$
A. 12 B. 17
C. 24 D. 34

39. A Nissan travelled 288km at an average speed of 96km/h, on the return journey the average speed was reduced to 72km/h. What is the average speed for the whole journey?
A. 84 km/h B. $82\frac{2}{7}$ km/h
C. $41\frac{1}{7}$ km/h D. $38\frac{2}{5}$ km/h

40. The volume of water in a tank is 20.68 m^3. What is the amount of water in litres?
A. 206.8
B. 2068
C. 20680
D. 206800

41. In the figure below line **AB** and **CD** are parallel. Line **EF** is a transversal.



Which one of the following contains equal angles?
A. a and e
B. c and g
C. b and f
D. d and g

42. Which one of the following properties is **not true** for both a square and a rhombus?
A. All angles are equal.
B. All sides are equal.
C. Opposite angles are equal.
D. Diagonals bisect at right angles.

43. The table below shows the number of pupils absent from a class of 48 pupils in a certain week.

	MON	TUE	WED	THUR	FRI
BOYS	5	2	4	2	4
GIRLS	3	3	3	4	2

What was the modal attendance for the week?
A. 41 B. 42
C. 43 D. 44

44. Simiyu paid shs.2800 after getting a 30% discount. How much discount was he given?
A. shs. 840
B. shs. 1200
C. shs 1960.
D. shs 4000

45. Construct a triangle **ABC** such that **AB** = 9cm **BC** = 8cm and **AC** = 6cm. Construct a circle touching all the vertices of the triangle. What is the radius of the circle?
A. 6cm
B. 4.6cm
C. 8.6cm
D. 9.2cm

46. Which is the correct order of writing the fractions $\frac{2}{3}$, $\frac{1}{2}$, $\frac{2}{5}$, $\frac{4}{9}$ and $\frac{3}{7}$ in ascending order.
A. $\frac{2}{5}, \frac{3}{7}, \frac{4}{9}, \frac{1}{2}, \frac{2}{3}$
B. $\frac{1}{2}, \frac{2}{3}, \frac{2}{5}, \frac{3}{7}, \frac{4}{9}$
C. $\frac{2}{3}, \frac{1}{2}, \frac{4}{9}, \frac{3}{7}, \frac{2}{5}$
D. $\frac{4}{9}, \frac{3}{7}, \frac{2}{5}, \frac{2}{3}, \frac{1}{2}$

47. The table below shows the postal charges in shillings on small packets in a certain year.

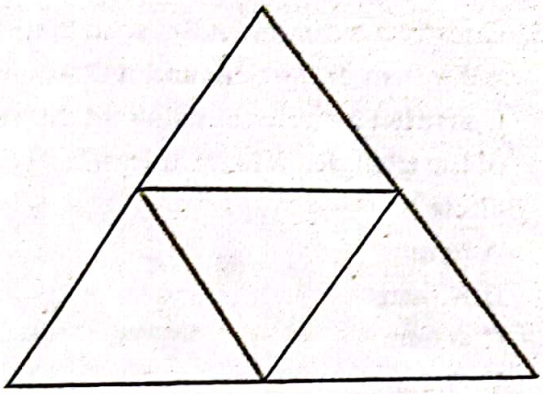
Mass of packet	East Africa	Rest of Africa	Rest of the world
Not over 20g	39.00	44.00	58.00
Not over 100g	88.00	160.00	144.00
Not over 250g	177.00	204.00	265.00
Not over 500g	309.00	365.00	472.00
Not over 1kg	519.00	608.00	758.00
Not over 2kg	718.00	840.00	1099.00
Lach additional 1kg up to 5kg	354.00	420.00	543.00

How much did Mulama pay for sending the following packets?
950 g to Tanzania, 5 kg to Nigeria, 251 g to Italy

A. Sh. 1831 B. Sh. 2881

C. sh. 2884 D. Sh. 3091

48. The figure below represents the net of a solid.



What solid can be formed from the net?

A. Rectangular prism

B. Triangular prism

C. Rectangular pyramid

D. Triangular pyramid

49. James was born on 6th January 2009. How old was he on 6th march 2011?

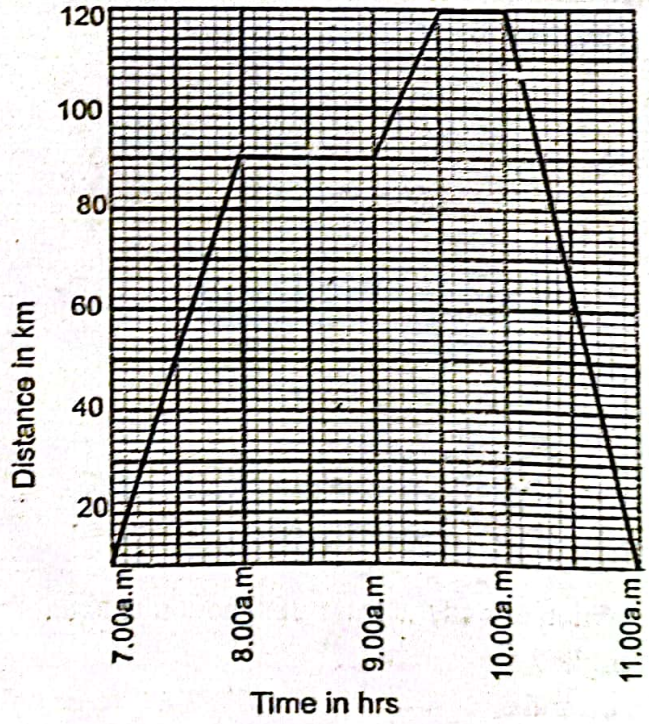
A. 2years 59days

B. 2years 60days

C. 2years 61days

D. 2years 62days

50. The graph below shows Mayekus journey by bus from X to Y and back on the graph paper below.



What was Mayekus average speed for the whole journey?

A. 48km/h B. 60km/h

C. 80km/h D. 96km/h