

KCPE NOVEMBER 2023 PREDICTION MASTER CYCLE 10
51600310

035713655



KENYA NATIONAL PREDICTION TESTS
KCPE



516003

MATHEMATICS

Time: 2 hours

INSTRUCTIONS TO CANDIDATES (Please 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

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 the 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 and 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.

35. The following are factors of sixteen. Which one is the odd one out?

- A. 16
- B. 1
- C. 8
- D. 3

5. (A) (B) (C) (D) 15. (A) (B) (C) (D) 25. (A) (B) (C) (D) 35. (A) (B) (C) (D) 45. (A) (B) (C) (D)

On the answer sheet:

In the set of boxes numbered 35, 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 8 printed pages.

© Mtihani Bora

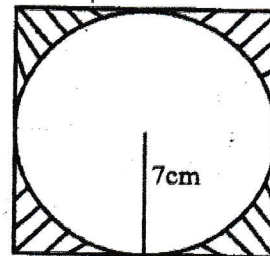


906503

Contact Mr Machuki 0724333200/0795491185 for Marking Schemes or kenyaeducators.co.ke

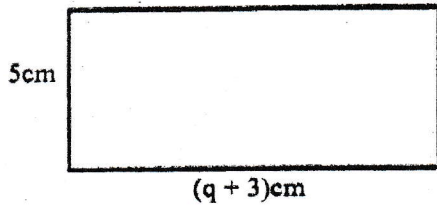
1. Write the numbers which is 1000000 more than 60350964 in words
- A. six hundred and three million fifty thousand nine hundred and sixty four
- B. six one million four hundred and fifty thousand nine hundred and sixty four
- C. fifty nine million three hundred and fifty thousand nine hundred and sixty four
- D. Sixty one million three hundred and fifty thousand nine hundred and sixty four
2. What is the value of $\frac{2(36 + 8 \times 2) - 4 \times 2}{2(7 - 5)}$
- A. 124 B. 18
- C. 14 D. 2
3. What is 5689.99975 rounded off to the nearest 3 decimal places
- A. 6000 B. 5689.9997
- C. 5690.000 D. 5689.999
4. What is the place value of digit 5 obtained after working out?
 $367502 \div 5 =$
- A. 500 B. thousands
- C. hundreds D. tens
5. Simplify $5x + \frac{1}{4}(7x + \frac{1}{2}y)$
- A. $8\frac{3}{4}x + \frac{1}{2}y$ B. $6\frac{3}{4}x + \frac{1}{8}y$
- C. $27x + \frac{1}{8}y$ D. $6\frac{3}{4}x + \frac{1}{2}y$
6. Work out $\frac{48.16 - (4.08 + 1.7)}{0.4}$
- A. 1059 B. 10.59
- C. 114.45 D. 105.95

7. Arrange the following fractions in ascending order
 $\frac{3}{4}, \frac{7}{8}, \frac{9}{16}, \frac{19}{32}$
- A. $\frac{19}{32}, \frac{9}{16}, \frac{7}{8}, \frac{3}{4}$
- B. $\frac{3}{4}, \frac{19}{32}, \frac{9}{16}, \frac{7}{8}$
- C. $\frac{9}{16}, \frac{19}{32}, \frac{3}{4}, \frac{7}{8}$
- D. $\frac{7}{8}, \frac{3}{4}, \frac{19}{32}, \frac{9}{16}$
8. What is the value of $\sqrt{\frac{9+16}{100-36}}$
- A. $3\frac{1}{8}$ B. $1\frac{3}{4}$
- C. $\frac{5}{64}$ D. $\frac{5}{8}$
9. How many two fifths are there in 30kg?
- A. 75 B. 65
- C. 45 D. 12
10. Calculate the area of the shaded part in the figure below in square metres

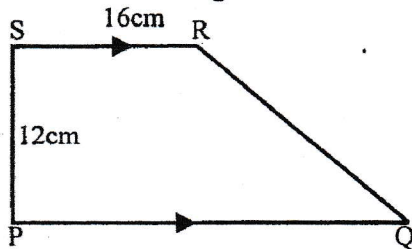


- A. 0.0154 B. 0.042
- C. 0.0196 D. 0.0042

11. The area of a rectangle below is 75cm^2 . Find the value of q

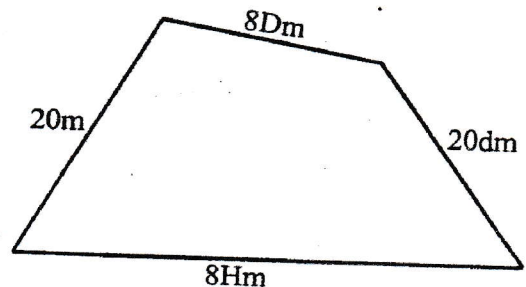


- A. 18cm B. 12cm
C. 40cm D. 15cm
12. Solve the equation:
 $\frac{3}{4} + 2(x - 2) = 3 + 2x$
A. $\frac{1}{2}$ B. $2\frac{1}{6}$
C. $1\frac{9}{16}$ D. $1\frac{3}{10}$
13. Work out:
 $\frac{7}{8}$ of $2\frac{2}{7} - (1\frac{3}{16} + \frac{3}{8})$
A. $1\frac{3}{16}$ B. $1\frac{9}{16}$
C. $2\frac{13}{16}$ D. $\frac{7}{16}$
14. The area of the figure below is 216cm^2



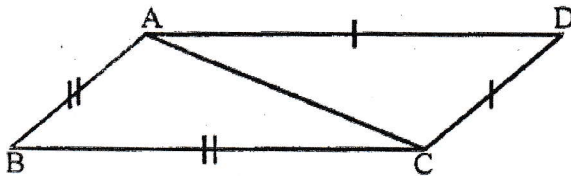
- What is the length of line PQ
A. 20cm B. 15cm
C. 36cm D. 4cm
15. A pipe has a diameter of 7cm and 2m long. What is its surface area in square centimetres
A. 4400cm B. 4.4cm
C. 440cm D. 44cm
16. Six women working at the same rate can complete washing clothes in 8 hours. How many more hours will it take 4 of the women to complete the same work?
A. $5\frac{1}{3}$ B. 12
C. 3 D. 4
17. Onyango bought 5 packets of sweets @ sh 200 all the sweets in one packet got spoilt. He sold the remaining packets @ sh 210 what percentage loss did he make?
A. 16% B. 5%
C. 84% D. $19\frac{1}{2}\%$

18. What is $6\frac{1}{4}$ squared?
A. $39\frac{1}{16}$ B. $2\frac{1}{2}$
C. $36\frac{1}{16}$ D. $12\frac{1}{2}$
19. A distance of 750m is represented on a scale drawing by 2.5cm. What is the scale used on the map
A. 1:1000 B. 1:30000
C. 1:300000 D. 1:300
20. Edwin and Jared shared some money such that Edwin got $\frac{3}{5}$ of the money. What was the ratio of Jared's share to Edwin's share?
A. 2:3 B. 3:5
C. 5:3 D. 3:2
21. How many days are there from 15th July and 15th September this year?
A. 63 B. 62
C. 61 D. 60
22. The diagram below shows Omollo's farm.



- Calculate the distance around it in metres
A. 54m B. 720m
C. 902m D. 702
23. Korir is thrice the age of his son. If the sum of their ages is 60 years. How old will be Korir in 10 years time.
A. 35 B. 45
C. 55 D. 65
24. A rectangular water tank is length 9m, 8m wide and 5m high is full of water. If 180,000 litres of water was drawn from this tank. What is the new height of the tank in metres
A. 2.5m B. 25m
C. 250m D. 0.3m

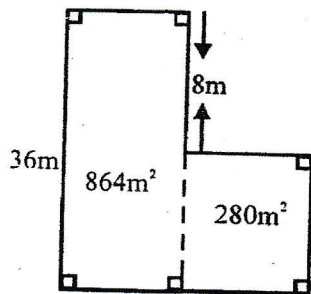
25. Construct triangle XYZ such that XY=8cm, YZ=6cm and XZ=10cm. Draw a circle touching the edges of the triangle. What is the radius of the triangle?
- A. 5cm B. 4cm
C. 2.5cm D. 36cm
26. Three bells are set to ring out at intervals of 4 minutes, 6 minutes and 9 minutes respectively. If they all ring together now after how many minutes will they ring together again?
- A. 24 B. 12
C. 18 D. 36
27. What is the value of $\frac{2x+1}{3y^2-y^2}$ When $x=2$ and $y=2x$?
- A. $\frac{7}{48}$ B. $\frac{11}{3}$
C. $\frac{3}{4}$ D. $\frac{1}{12}$
28. James obtained the following marks in a mathematics test.
19, 36, 20, 15, 24, 15, 40, 8, 12
What is the sum of the mean, mode and median of the marks?
- A. 21 B. 55
C. 19 D. 15
29. A bag of potatoes weighed $100\frac{1}{2}$ kg. Jane bought 15 such bags. She then removed 10.5kg of potatoes from each bag. What total mass of potatoes remained?
- A. 13.50kg B. 157.5kg
C. 1507.5kg D. 1497kg
30. In the figure below line AB=BC and AD=CD. Angle ADC=30° and angle ABC=70°



- What is the size of angle BCD?
- A. 130° B. 75°
C. 55° D. 80°

31. The temperature of a frozen mass of ice was 0°C. After sometime the temperature rose by 58°C. What was the final reading on the thermometer?
- A. 48°C B. 58°C
C. 0°C D. 29°C
32. Kamau covered 720m in 36 seconds. Calculate his speed in kilometers per hour (km/h)
- A. 120km B. 20km/h
C. 20km/h D. 72km/h
33. Kimani received sh 900 as a commission on goods he sold worth sh 15000. What percentage commission was he paid?
- A. 6% B. 25%
C. 9% D. $16\frac{2}{3}\%$
34. After selling an item a trader realised that he had made a loss of sh 650. If this represented 13% loss. Calculate the marked price of this item.
- A. Sh 4350 B. Sh 4550
C. Sh 4500 D. Sh 5000
35. Simplify the inequality below $\frac{4y-6}{2} < \frac{5y+4}{3}$
- A. $13 > y$ B. > 13
C. $y > 8$ D. $13 > y$
36. In the year 2017, 375000 seedlings were planted in Ngong forest. This was 25% more than the number of trees that had been planted in the year 2016. How many trees had been planted in the year 2016?
- A. 450000 B. 300000
C. 45000 D. 30000
37. Which of the following quadrilateral has all the properties below
(i) all sides are equal
(ii) all angles are right angles
(iii) the lengths of the diagonals are equal
(iv) diagonals bisect each other at right angles
- A. Rhombus B. Trapezium
C. Rectangle D. Square
38. Simplify for p in $3(p+4) - 10 = 32$
- A. 10 B. $12\frac{2}{3}$
C. $11\frac{1}{3}$ D. $16\frac{2}{3}$

39. What is the value of $(40 - 8) \div \frac{1}{16} \times \frac{1}{4}$?
- A. 128 B. $\frac{1}{2}$
 C. $\frac{3}{2}$ D. 8
40. Kariches bought the following items from a supermarket
- 2 packets of unga @ sh 120
 3kg of sugar @ sh 155
 2kg of rice @ sh 78
 1 packet of salt for sh 15
- He gave the shopkeepers five-200 shillings notes. What balance did he get?
- A. Sh 424 B. Sh 876
 C. Sh 124 D. Sh 114
41. What is the value of digit 7 in the number 8274956?
- A. ten thousands B. ten thousands
 C. seven thousand D. seventy thousand
42. The figure below represents a school garden. What is the distance round the garden in metres?

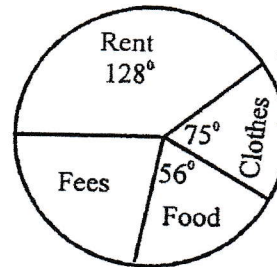


- A. 140m B. 80m
 C. 160m D. 280m
43. The table below shows John's marks in trial KCPE 2019. The information is represented on the table below

Subject	Eng	SSR	SCIE	MATH	KISW
Marks		76	78	88	78

- He obtained a total of 400 marks in the test. What angle would represent English in a pie chart?
- A. 68° B. 72°
 C. 79° D. 67°
44. A three hour meeting started 50 minutes late and ended at 3.15 p.m. At what time was the meeting supposed to start?
- A. 11 : 25 am B. 12:25am
 C. 1:15pm D. 11:45am

45. What is half the value of $2b(a^2 - c) - a^2(2b - c)$ given that $a=6$, $b=a-1$ and $c=a+1$?
- A. 182 B. 110
 C. 91 d. 50
46. Caroline deposited sh 600000 in a bank. At the end of 3 years she earned an interest of sh 18000. Calculate the rate charged
- A. 0.9% B. 15%
 C. 1% D. $33\frac{1}{3}\%$
47. John covered a distance of 36km in half an hour. What was his speed in m/s
- A. 72 B. 20
 C. 5 D. 18
48. An empty carton weighs 750 grams. Twelve packets of soap powder each weighing 500grams are packed in one carton. What is the mass of forty such cartons full of soap in kgs
- A. 210 B. 270
 C. 240.75 D. 240
49. The pie chart below shows how Amos used his monthly salary of sh 13860



- How much more did he spend on food and clothes than school fees?
- A. Sh 1155 B. Sh 1260
 C. Sh 6300 D. Sh 4200
50. What is the next shape in the pattern below

