

K.C.P.E SEVENTH TRIAL STANDARD EIGHT 2022

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 the 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 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 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:

14. What is $\text{KSh } 898.997$ rounded off to nearest hundredth?
- A. $\text{KSh } 898.99$
B. $\text{KSh } 899.00$
C. $\text{KSh } 898.90$
D. $\text{KSh } 899.91$

The correct answer is (B)

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 D

In the set of boxes numbered 14, the box with the 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 8 printed pages.

Candidates should check the question paper to ensure that all the pages are printed as indicated and no questions are missing.

Website: www.jesma.or.ke

MATHEMATICS

- Which of the following number is 2 368 574.05?
 - Two million three hundred and sixty eight thousand five hundred and seventy four and five tenth.
 - Two million three hundred and sixty eight thousand five hundred and seventy four and five hundredth.
 - Two million three hundred and sixty, eight thousand five hundred and seventy four and five thousandth.
 - Two million three hundred and sixty eight thousand five hundred and seventy four and five hundreds.

- What is 8 736.997 rounded off to two decimal places?
 - 8 737.00
 - 8 736.99
 - 8 737.90
 - 8 736.00

- How many days are there between July 3rd to September 3rd?
 - 60
 - 61
 - 62
 - 63

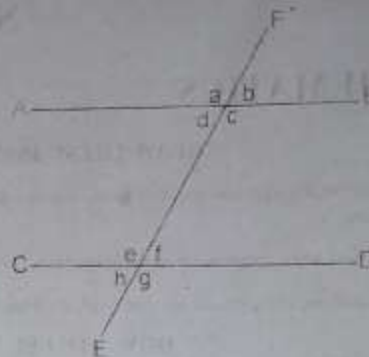
- What is the total value of digit 9 in the product of 364 and 225?
 - 81 900
 - 9 000
 - 900
 - 90

- What is the value of

$$\frac{6(4^2 + 2^2) - 4 \times 6 \div 2}{3(13 - 10)}$$
 ?
 - 108
 - 18
 - 9
 - 12

- Jamal bought the following items from a shop.
 - 2^{kg} sugar @ sh. 120
 - 25^{kg} of tea leaves for sh. 130
 - 3^l litres of cooking oil @ sh. 220
 - 2 - 2kg packets of maize flour @ 110 per kg
 - 3 bars of soap @ 240
 How much balance did he get if he paid using 3 - 1 000 shilling notes?
 - Sh. 2 360
 - Sh. 540
 - Sh. 640
 - Sh. 740

- In the figure below line AB is parallel to line CD, line EF is a transversal.



- Which of the following statement is **correct**?
- Angle e and angle g are vertically opposite.
 - Angle f and angle d are co-interior angles.
 - angle b and angle d adds up to 180°
 - Angle e and angle f alternating angles.

- What is the sum of the squareroot of 0.0196 and the square of 0.25?
 - 0.14
 - 0.0625
 - 0.1625
 - 0.2025

- Which of the following is the next number in the pattern 1, 4, 9, 16, 25.
 - 42
 - 39
 - 36
 - 41

- What is the simplest form of

$$6x + \frac{1}{3}(18x - 12y) \text{ ?}$$

- $4x - 12y$
- $12x - 4y$
- $12y + 4x$
- $12x + 4y$

11. The table below shows the bus timetable from town A to town F.

Town	Arrival time	Departure time
A		6:00am
B	8:15am	9:00
C	11:30am	11:40am
D	1:20pm	1:35pm
E	3:25pm	3:40pm
F	5:20pm	

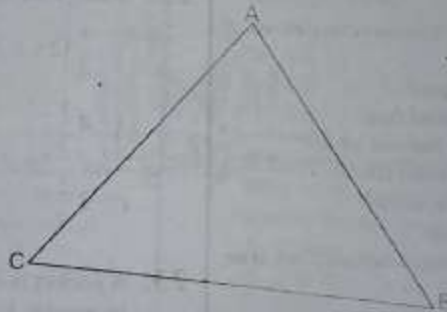
If the driver drove at a speed of 90km/hr, how far is it from town E to town F?

- A. 150km B. 90km
C. 120km D. 135km

12. The perimeter of a rectangular plot of land is 560m. The width is 120m. What is the length of the diagonal?

- A. 160m
B. 180m
C. 200m
D. 240m

13. The triangle ABC below is drawn to scale.



What is the supplement of angle BCA?

- A. 53° B. 37° C. 127° D. 75°

14. What is the value of

$$\frac{3}{4} \left(\frac{1}{2} + \frac{2}{5} \right) - \frac{1}{5} \times \frac{3}{8}$$

- A. $\frac{1}{5}$ B. $\frac{3}{5}$
C. $2\frac{1}{5}$ D. $2\frac{2}{5}$

15. Karanja paid sh. 20 400 for a cupboard after getting 15% discount. How much less would he have paid if he was given 20%?

- A. Sh. 2 400
B. Sh. 1 200
C. Sh. 16 320
D. Sh. 24 000

16. What is the difference in the LCM of 18, 24, 36 and GCD of 72, 90?
 A. 54
 B. 72
 C. 18
 D. 90

17. A rectangular water tank measures 0.75m by 0.8m by 1.2m holds water to a height of 0.9m. How many litres does it hold?
 A. 720l
 B. 0.72l
 C. 540l
 D. 0.54l

18. The fractions $\frac{3}{7}, \frac{2}{5}, \frac{3}{8}$ and $\frac{5}{8}$ are to be arranged from the largest to the smallest. Which one of the following is the correct order?

- A. $\frac{3}{8}, \frac{2}{5}, \frac{3}{7}, \frac{5}{8}$
 B. $\frac{5}{8}, \frac{3}{8}, \frac{3}{7}, \frac{2}{5}$
 C. $\frac{5}{8}, \frac{3}{7}, \frac{2}{5}, \frac{3}{8}$
 D. $\frac{2}{5}, \frac{3}{8}, \frac{3}{7}, \frac{5}{8}$

19. The following are characteristics of a quadrilateral.

- i) Diagonals are equal.
 ii) One pair of parallel line.
 iii) Diagonal bisect but not at 90° .
 iv) Two pairs of parallel lines.
 v) Diagonals are not equal.
 vi) All sides are equal.

Which of the following statements are true for trapezium?

- A. (ii), (v), (vi)
 B. (iii), (v) only
 C. (ii), (iii), (v)
 D. (ii), (v) only

20. The table below shows the number of crates of soda consumed at Bomus hotel in one week during the elections.

Mon	Tue	Wed	Thur	Fri	Sat
214	312	418	208	278	316

Which is the mean of the number of crates consumed highest in two consecutive days?

- A. 365
 B. 367
 C. 313
 D. 418

21. Construct a triangle ABC such that AB = 7.2cm, BC = 5.8 and AC = 6.2cm.

What is the size of angle ABC?

- A. 125°
 B. 75°
 C. 50°
 D. 55°

22. What is the value of x in the equation?

$$\frac{1}{2}(2x + 2) + \frac{1}{3}(4x - 2) = 5$$

- A. $4\frac{1}{7}$
 B. 2
 C. $2\frac{2}{7}$
 D. $4\frac{3}{7}$

23. A packet is in a form of a pyramid with a triangular base. What is the product of edges and vertices?

- A. 24
 B. 18
 C. 96
 D. 40

24. To complete a certain job in 18 days a company hired 30 people. How many more days will it take if 12 people did not turn up?

- A. 30 days
 B. 12 days
 C. 45 days
 D. 9 days

25. Which of the following sets of measurement will not form a right angled triangle when drawn?
- 10cm, 24cm, 26cm
 - 0.15cm, 3.6cm, 3.9cm
 - 16cm, 30cm, 34cm
 - 0.7cm, 2.4cm, 2.5cm
26. A pick up was loaded with 4 cartons each holding 6 - 2kg tins of cooking fat, 120 bales of unga each holding 12 - 2kg packets and 25 cartons each holding 25 - 1kg bars of soap. What was the total mass of the loaded pick-up if its empty mass was 1 200kg?
- 3 553kg
 - 4 753kg
 - 3 553kg
 - 4 753kg
27. Hassan bought a piece of land for shillings 1.5 million. He subdivided the plot into six equal plots each. He sold each plot at sh. 400 000. What percentage profit did he make?
- 40%
 - 30%
 - 60%
 - 90%
28. The area of a trapezium is 45cm². The parallel sides are 12.4cm and 7.6cm long. What is the perpendicular distance between the two parallel sides?
- 5cm
 - 6.5cm
 - 4.5cm
 - 3.8cm
29. Kamama deposited sh. 120 000 in a commercial institution that offered simple interest at the rate of 6% per annum. Njeri deposited the same amount in a financial institution that offers 6% compound interest. How much more interest did Njeri make than Kamama after two years?
- Sh. 14 832
 - Sh. 14 400
 - Sh. 432
 - Sh. 400
30. A prayer meeting had 600 men. The number of girls was three times that of men and 360 more than that of women. The number of boys was 90 more than that of girls. What was the total number of people who attended the meeting?
- 2 157
 - 5 550
 - 6 450
 - 5 730
31. The cash price of a T.V is sh. 18 000. The hire purchase price is 60% more than the cash price. Lilian bought it on hire purchase terms. He paid a deposit and 12 equal monthly instalments of sh. 2 160. How much was the deposit?
- Sh. 2 880
 - Sh. 25 920
 - Sh. 26 400
 - Sh. 28 800
32. Which of the following ratio given below represent 75%?
- 4:3
 - 3:4
 - 4:5
 - 5:4
33. A rectangle measuring 64cm long by 16cm wide has the same area as a square. What is twice the perimeter of the square?
- 128cm
 - 256cm
 - 320cm
 - 160cm
34. What is the value of $0.72 \div 0.5$ of $2.4 \div 0.36 \div 4$
- 2.83
 - 1.83
 - 1.84
 - 2.84
35. A sales person earns a basic salary of sh. 18 500. He is also paid 4% commission on the sale of goods above sh. 80 000. How much money did he earn in a month that he sold goods worth sh. 530 000?
- Sh. 18 000
 - Sh. 39 700
 - Sh. 21 200
 - Sh. 36 500

36. On a map whose scale is 1:40 000 a piece of land is rectangular in shape represented by 6cm by 4cm. What is the actual area of the land in hectares?

- A. 0.38hae
- B. 3.84hae
- C. 38.4hae
- D. 384hae

37. Three boys Tonny, Teddy and Tom got a total of Sh. 1 650. Tony gets sh. 80 more than teddy while Tom got half of what Tonny and Teddy got. If Tony got sh. x , which of the following equation can be used to get the value of x ?

- A. $6x + 240 = 1 650$
- B. $\frac{1}{2}x + 120 = 1 650$
- C. $3x + 120 = 1 650$
- D. $3x - 120 = 1 650$

38. In the year 2020 Lizar school had 1 600 pupils of whom 55% were boys. At the end of the year the number of girls increased by 20% and that of boys decreased by 10%. What was the total number of pupils at the end of the year?

- A. 1 656
- B. 1 832
- C. 1 652
- D. 1 760

39. The height of an isosceles triangle is 8cm. Each of the two sides measures 10cm. What is the area of the triangle?

- A. 24cm
- B. 48cm
- C. 36cm
- D. 96cm

40. The table below shows the number of carton of milk supplied at a certain shop in one week. The number for Saturday was not included.

Day	Mon	Tue	Wed	Thur	Fri	Sat	Sun
No. of crates	16	20	36	22	16		32

If the total number of crates delivered in seven days was 168. What was the median sale?

- A. 26
- B. 24
- C. 22
- D. 16

41. Jane had a certain amount of money. She gave $\frac{1}{4}$ to her first born. She gave $\frac{1}{3}$ to her second born. She also gave $\frac{1}{10}$ of the remainder to her last born. If she was left with Sh. 3 600, how much had she given the first born?

- A. Sh. 9 600
- B. Sh. 3 200
- C. Sh. 2 400
- D. Sh. 400

42. The perimeter of a rectangular plot of land is 240m. The length of the rectangle is 20m more than the width. What is the area of the plot in ares?

- A. 3 500ares
- B. 35ares
- C. 4 800ares
- D. 24ares

43. A cyclist took 45 minutes to travel from his home to the market at a speed of 36km/h. He took 1 hour 12min to cycle back home. What was his speed in km/h from market back home?

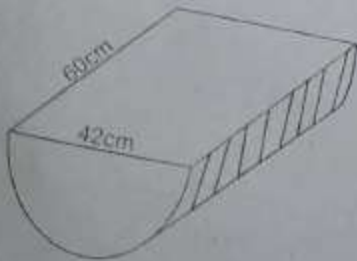
- A. 27km/h
- B. $22\frac{1}{2}$ km/h
- C. 18km/hr
- D. 36km/h

44. A rectangular water tank has a base of 3.0m long and 1.5m wide. It is to be filled to a height of 2m high. How many 100 litre Jerrycan can be used to fill the tank?
- 9 000
 - 900
 - 90
 - 9

45. Peter salary was Sh. 14 400. If the salary was increased in the ratio 4:3 and he saves $\frac{1}{3}$ of the new salary. How much money does he save?
- Sh. 19 200
 - Sh. 7 200
 - Sh. 4 800
 - Sh. 6 400

46. A clock gains 30 seconds every hour. If the watch was set right on Saturday 11:30am. What day and time will it show after 10 hours?
- Saturday 9:35am
 - Sunday 9:35am
 - Saturday 9:35pm
 - Sunday 9:35pm

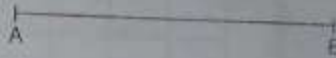
47. The figure below shows a half cylindrical block of wood with diameter of 42cm and length of 60cm.



What is the surface area of the cylindrical block?

- 5 346cm²
- 41 580cm²
- 7 866cm²
- 9 306cm²

48. On the line AB below construct a triangle ABC such that line $AC \perp BC$ 7cm. Construct a bisector of angle CAB to meet line BC at X .

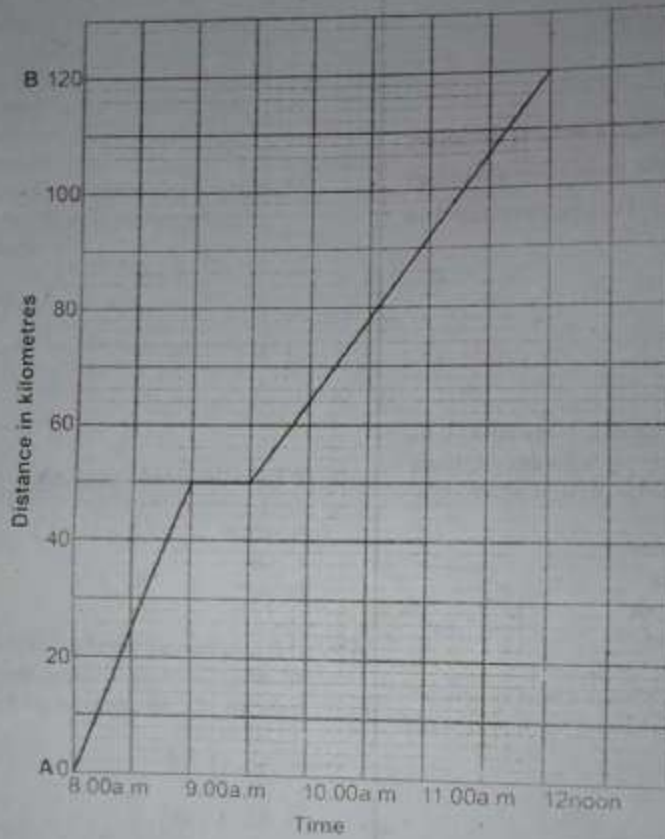


What is the size of angle AXB ?

- 102°
- 68°
- 78°
- 44°

49. Hussein earns a total of sh. 15 750 after working for 21 days. How much less does she earn after working for 15 days?
- Sh. 4 500
 - Sh. 11 250
 - Sh. 750
 - Sh. 3 750

50. The graph below shows the journey by Susan from town A to town B. After travelling for one hour she stopped for half an hour and later proceeded at an average speed.



What was her speed after the rest?

- A. 20km/h B. $28\frac{1}{2}$ km/h C. 40km/h D. 32km/h