THE FINAL CURVE

K.C.P.E TRIAL -2020

-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 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 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:

12. Change three thousand hectometres into kilometres

A. 3
B. 300
C. 30
D. 0.3

The correct answer is **B. (300)**

On the Answer sheet:

12. [A] [B] [C] [D] **13.** [A] [B] [C] [D] **14.** [A] [B] [C] [D] **15.** [A] [B] [C] [D]

In the set of boxes number **12**, 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 8 printed pages.

1. What is 7742.59234 to the nearest thousandth?
   A. 7742.590
   B. 7742.592
   C. 7742.5923
   D. 7743.000

2. Four bells ring at intervals of 12 minutes, 8 minutes,16 minutes and 24 minutes. If they rang together at 11.12 am, when will they ring together again?
   A. 12.00 noon
   B. 10.36 am
   C. 12.00 mid night
   D. 10.36 pm

3. Arrange the following numbers in descending order. 0.125, $^3/_5$, 0.325, $^4/_9$?
   A. 0.125, $^4/_9$, 0.325, $^3/_5$
   B. $^3/_5$, $^4/_9$, 0.325,0.125
   C. 0.125,0.325,$^4/_9$, $^3/_5$
   D. 0.325,$^4/_9$, $^3/_5$, 0.125

4. What is the difference between five million two hundred and fifty four thousand six hundred and one and eleven million?
   A. 75453999
   B. 574539
   C. 5749953
   D. 5745399

5. Work out the sum of the total value of digits in the hundreds and thousands position in the number 4789463.
   A. 4789400
   B. 8600
   C. 9400
   D. 9463

6. A flour milling company packed 3 tonnes of sugar into 1500 grams packets. How many packets of flour did they get?
   A. 20000
   B. 200
   C. 200 000
   D. 2000

7. A project assessor awarded seven different projects an average of 5 points. He had awarded six projects the following scores: 8,2,4,6,3,4. What was the median score for the seven projects?
   A. 7
   B. 4
   C. 6
   D. 7

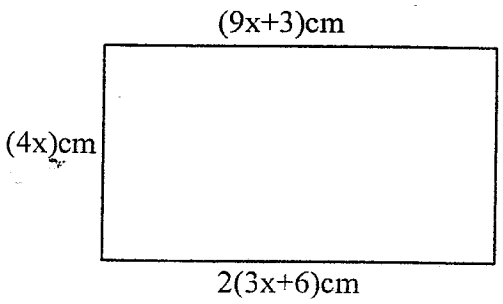
8. What is the square root of $4^{25}/_{36}$
   A. $2^1/_6$
   B. $2^5/_6$
   C. $1^1/_2$
   D. $16^{25}/_{36}$

9. What is the value of $\frac{0.08 \times 2.8 \times 0.6}{1.2 \times 0.2}$
   A. 0.56
   B. 0.056
   C. 56
   D. 5.6

10. Work out the value of **y** in
    $\frac{3y+4}{2} - {}^1/_2 = 3$
    A. $^1/_2$
    B. 5
    C.1
    D.4

Working space

11. Calculate the area of the figure shown below.



A. 203 cm^2
B. 69 cm^2
C. 360 cm^2
D. 195 cm^2

12. Two men take 5 days to plough a piece of land. How many men will be required to plough the same piece of land in 2 days?
A. 5 men
B. 2 men
C. 6 men
D. 12 men

13. In Kam Kam game reserve the number of antelopes was twice that of giraffes. The number of zebras was half the total number of both antelopes and giraffes. If there are 2700 animals altogether, how many zebras were there?
A.900
B.1200
C.600
D.300

14. In a church, the ratio of men to women is 9:7. If there are 32 more men than women, how many members are there in that church?
A.184
B.625
C.256
D.562

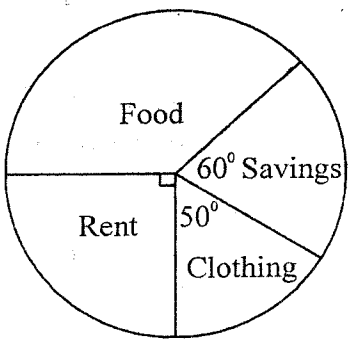
15. Four hundred and eighty-2dl packets of milk were emptied into a 120-litre container. How many more such packets of milk were needed to fill the container?
A.240
B.120
C.24
D.12

16. Mbaka bought the following items from G-mart super-market
$2^1/_2$kg of onions @ sh 40
$^1/_2$kg of meat @sh 440
2kg of sugar for sh133
4kg of carrots @sh20
$2^1/_2$kg of potatoes @sh 60
He paid for the items using two five hundred shillings notes. How much balance did he get?
A.sh 317
B.sh 427
C.sh340
D.sh 327

Working space

17. The charges of sending a telegram were as follows:
Sh 10 for the first 10 words or less. Any extra word was charged sh 1.50 each. A tax of 10% was charged on the total amount. The total amount payable was then rounded off to the nearest 10 cents. What was the cost of sending the telegram below?
KABUGA GICHOHI BOX 143 SHAMAKHOHO GITHONGO ADMITTED ST MARY HOSPITAL. SEE HIM MUGO.
A. Sh 19.30
B. Sh 19.25
C. Sh 20.00
D. Sh 19.00

18. The pie-chart shows how John spends his monthly salary. If he spends sh. 6400 on food, how much more does he spend on rent than on clothing?

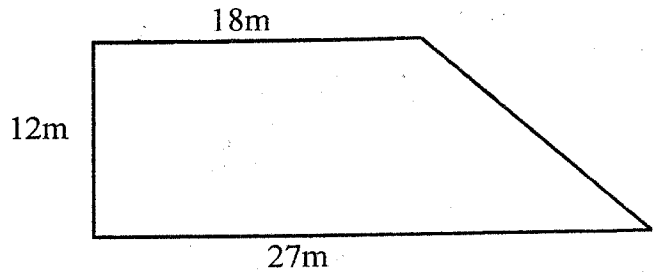


A.Sh. 1600
B.Sh. 2000
C.Sh. 3600
D.Sh. 2400

19. The mass of 3 boxes containing oranges is 93.9 kg. An empty box weighs 1.75 kg each and contains 394 oranges. What is the average mass of an orange?
A. 75 gm
B. 75 kg
C. 75 gm
D. 7.5 gm

20. A shop allowed a 5% discount on all articles. Mary bought a jembe whose marked price was sh. 500. How much less than sh. 1000 did she pay for the jembe?
A.Sh 475
B. Sh. 25
C. Sh. 95
D.Sh. 525

21. The figure below shows Maureen's piece of land. Calculate the distance around it three times.

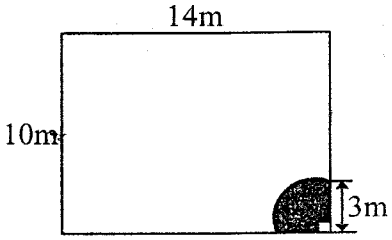


A. 72m
B. 270m
C. 216m
D. 15m

22. Wekesa invested some money in a business that paid interest at the rate of 15% p.a. At the end of nine months he withdrew sh. 1125, which was the interest earned. How much had he invested?
A.Sh. 13500
B. Sh. 7500
C. Sh. 90000
D. Sh. 10000

Working space

23. The shaded part shows a field that was watered by a sprinkler at a given time.



What area was being watered at one given time. $\left(\pi = \frac{22}{7}\right)$

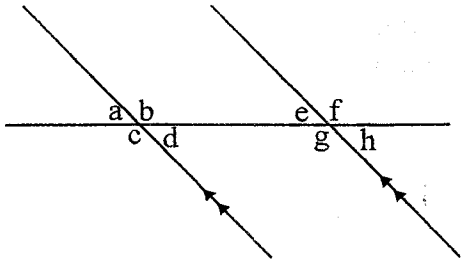
A. $1.8m^2$
B. $9.625m^2$
C. $38.5m^2$
D. $7.1m^2$

24. Simplify the following expression
$^1/_4(32a+16b)+2\ (2a - 4b)$
A. 4a-12b
B. 12 a - 4b
C. 4(3a+b)
D. 12a + 2b

25. Mr. Patel borrowed sh. 5000 from a bank that charged interest at the rate of 12% p.a. Calculate the amount of money he paid after 18 months.
A. Sh. 5750
B. Sh. 5936
C. Sh. 5900
D. Sh. 10800

26. Chumisa's salary is sh. 12600. She always uses 10% of her salary on food. If she is given a 10% increase. What is the difference between the amount spent on food before and after the increase?
A. Sh.126
B. Sh. 252
C. Sh. 2520
D. Sh. 2772

27. Which one of the following statements is **true**?



A. $c + d = g + f$
B. $c + h = b + f$
C. $a + g = 180^0$
D. $g + f = e + h$

28. Philis was paid sh 3000 in January. This was 16% less than what she was paid in February. How much was she paid in February?
A. Sh 2850
B. Sh 3500
C. Sh 7500
D. Sh 3571.40

29. The table below shows sales and purchases of green grams in Budoyi Green Grocers for 6 days.

Days	Mon	Tue	Wed	Thu	Fri	Sat
Kgs bought	420	50	100	105	60	30
Kgs sold	180	140	50	70	90	40

On which day was the number of kilograms sold one and a half times the number of kilograms bought for the green grams?
A. Friday B. Saturday
C. Monday D.Thursday

30. In Nandi village the number of women is twice the number of men and 1000 less than that of children. The number of women and men is 900. What is the number of women and children?
A. 2200 B. 400
C. 600 D. 1600

Working space

31 Find the surface area of the curved surface of a cylinder whose diameter is 140m and height 48m. (Use $\left(\pi = \frac{22}{7}\right)$

A. $2012m^2$
B. $21120m^2$
C. $10560m^2$
D. $684m^2$

32. Mwangi woke up at 03.45am. At what time had he slept, if he had slept for 6hrs 13 minutes?

A. 0932 hours
B. 2332 hours
C.2132 hours
D. 2231 hours

33. A research confirmed that that 9 girls dropped out of school after every 3 months. Also 6 boys dropped out of school in the same period. How many pupils dropped out of school in the year 2013?

A. 81
B. 36
C. 3
D. 60

34. The table below shows Oloo's crop production in his farm in the year 2012 in tonnes. The production of onions is **not** shown in the table

Crop	Cabbages	Onions	Cucumber	Tomatoes
amount	24		13	20

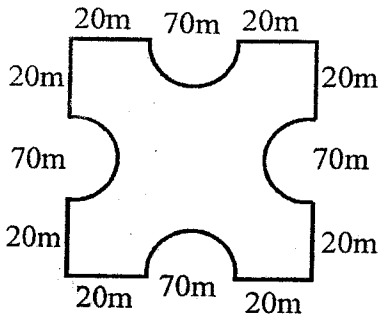
If he produced a total of 72 tonnes of produce, what angle in a pie would represent the onions?

A. 45^0
B. 30^0
C. 115^0
D. $75°$

35. Construct triangle XYZ in which XY=8cm, YZ=7cm and angle XYZ=75^0. Draw a circle to pass through points XY and Z. What is the diameter of the circle?

A. 9. 5 cm
B. 4.7cm
C. 10cm
D. 9.0cm

36. A boy went round the figure below five times. What distance did he cover? Calculate the distance covered in km



A. 0.3 km
B. 0.44km
C. 3km
D. 2.2km

37. Which of the following numbers is divisible by 8?

A. 60524
B. 92482
C. 52384
D. 172145

38. Joseph made sh. 935 profit after selling some items. If this represented 17% profit, at how much would he have sold the items to make 15% profit?

A. Sh. 5500
B. Sh. 4565
C. Sh. 5500
D. Sh. 5325

Working space

39. A lorry left Mombasa for Nairobi on Tuesday at 2145hours. It arrived 8hrs 20 min later. At what time and day did the lorry arrive in Nairobi?

A. Tuesday 6.05a.m
B. Wednesday 6.05p.m
C. Tuesday 6.05 p.m
D. Wednesday 6.05 a.m

40. Which statement among the following is true about a closed cuboid

A. It has 6 faces, 8 vertices and 12 edges
B. It has 4 faces, 18 vertices and 14 edges
C. It has 9 faces, 9 vertices and 9 edges
D. It has 12 faces, 8 vertices and 12 edges

41. A motorist covered 324 km driving at an average speed of 72km/h. He then drove at 88 km/h for $1\frac{1}{2}$ hours. What was his average speed for the whole journey.

A. 72km/h
B. 75km/h
C. 76km/h
D. 80km/h

42. If the volume of a cylinder whose height is 12cm is $7392cm^3$. Find its diameter.

A. 14cm
B. 28cm
C. 7cm
D. 196cm

43. The mean age of 54 pupils in a class is 13 years. Plus their teacher the mean age becomes $13\frac{2}{5}$ yrs. What is the teacher's age?

A. $21\frac{1}{2}$% years
B. 35 years
C. 55years
D. $18\frac{1}{5}$ years

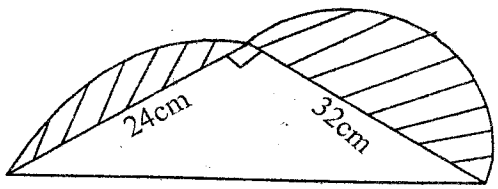
44. The table below shows a distance table from towns between A and town F

A					
40	B				
120	80	C			
185	145	65	D		
278	238	158	93	E	
333	293	213	148	55	F

Susan and her two children travelled from town B to E via town D. How many kilometres did they cover?

A. 238 km
B. 239 km
C. 262 km
D. 219 km

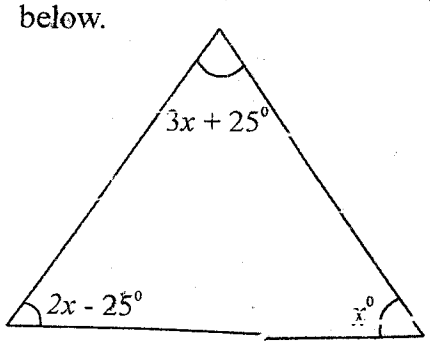
45. The diagram below shows Juma's orchard. The shaded area is planted orange trees, while the unshaded part is occupied by guava trees.



Calculate the area occupied by the guava trees. ($\pi = 3.14$)

A. $384m^2$
B. $244m^2$
C. $1012m^2$
D. $628m^2$

46. Find the difference between the largest and the smallest angles of the triangle drawn below.



A. 30^0
B. 115^0
C. 35^0
D. 85^0

Working space

47. What is the value of $2(mn + {}^{1}/_{2}n^{2}p)$ if $m=2$, $n=m+3$ and $p=2n$

A. 430 B. 270
C. 140 D. 260

48. Simplify ${}^{2}/_{5}x < {}^{3}/_{5}$

A. $x < 1{}^{1}/_{2}$ B. $x > 1{}^{1}/_{2}$
C. $x < 8$ D. $8 > x$

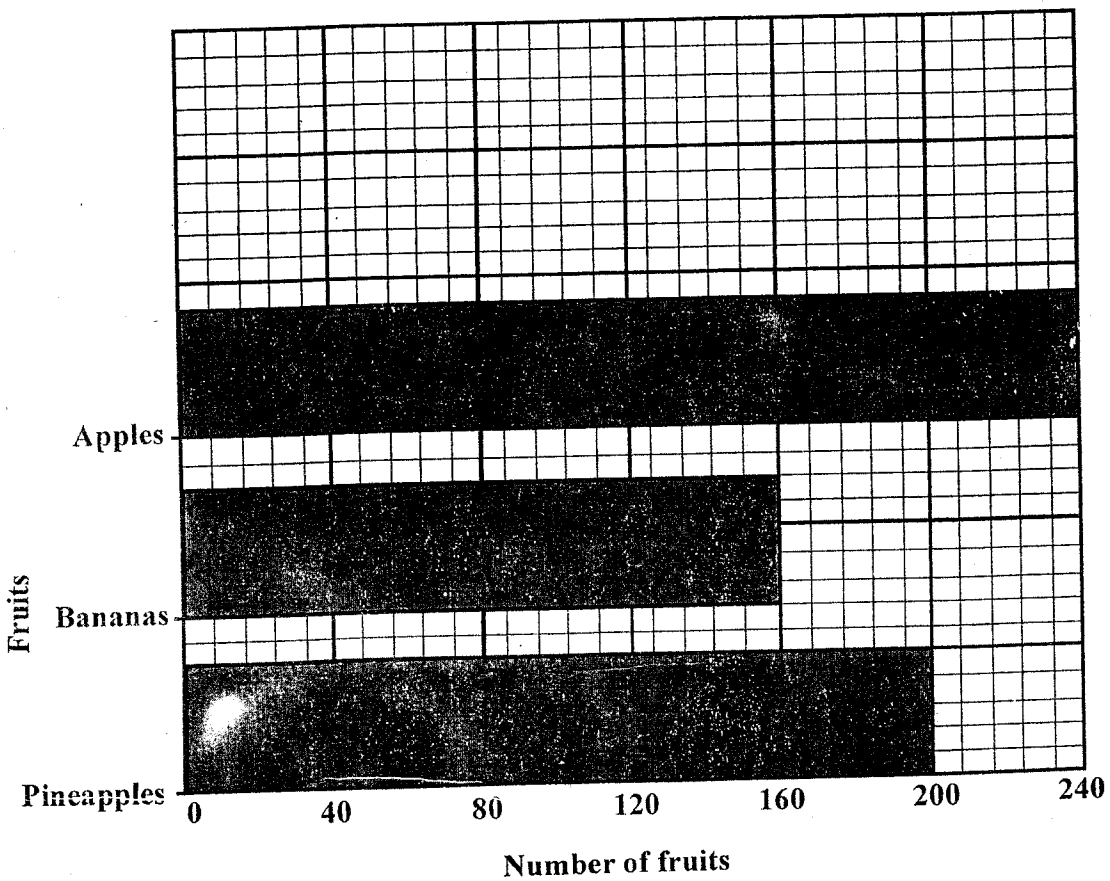
49. The following are characteristics of a certain figure

(i) It has two pairs of parallel lines
(ii) Its opposite angles are equal
(iii) Its diagonals are not equal but they bisect each other at right angles
(iv) Diagonals bisect the opposite angles
(v) All its sides are equal

The figure described above is likely to be a

A. Rhombus
B. The right angled trapezium
C. The Isosceles trapezium
D. The Parallelogram

50. The bar graph below shows the number of different fruits that Juma sold on a market day.



The price of the fruits were as follows.

10 pineapples for sh 80
5 bananas for sh 20
4 apples for sh 90

How much money did he receive altogether from the sales of the fruits?

A. Sh 2000 B. Sh 7640
C. Sh 6000 D. Sh 8240