

# K.C.P.E EIGHTH TRIAL STANDARD EIGHT 2018

## 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. A rectangular bar measures 10cm by 8cm by 5cm. What is its surface area?
- A. 160cm<sup>2</sup>  
B. 340cm<sup>2</sup>  
C. 400cm<sup>2</sup>  
D. 180cm<sup>2</sup>

The correct answer is **B** (340cm<sup>2</sup>)

#### 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.**

1. Which one of the following is 30056925?  
 A. Three million five hundred and sixty nine thousand and twenty five.  
 B. Thirty million five hundred and sixty nine thousand and twenty five.  
 C. Thirty million fifty six thousand nine hundred and twenty five  
 D. Three million fifty six thousand nine hundred and twenty five.

2. In the number 246 758 what is the quotient of the total value of digit 4 and digit 5?  
 A. 40 000  
 B. 800  
 C. 80  
 D. 50

3. What is the value of 3 699. 9965 rounded off to the nearest hundredth?  
 A. 3 700.00                      B. 3 699.90  
 C. 3 699.99                      D. 3 799.00

4. What is the value of  $\frac{90 + (36 - 6^2) 4 - 3 \times 7}{23}$  ?  
 A. 69                                      B. 23  
 C. 3                                        D. 29

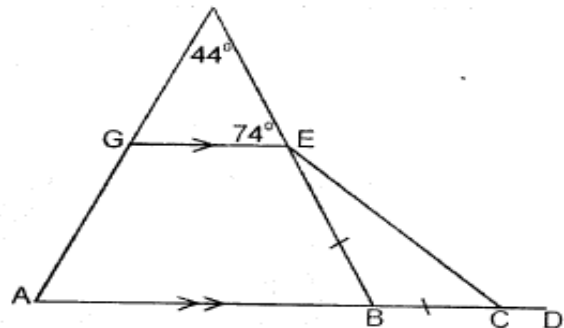
5. Solve the inequality below.  
 $4(3x - 2) < 2(x + 3)$   
 A.  $1\frac{2}{5} < x$   
 B.  $1\frac{2}{5} > x$   
 C.  $x < \frac{2}{5}$   
 D.  $x < 1\frac{4}{5}$

6. What is the value of  $\left(1\frac{1}{2} + \frac{3}{4}\right)$  of  $\frac{2}{3} - \frac{1}{4} \times \frac{1}{8} \div \frac{1}{16}$  ?  
 A. 2  
 B.  $\frac{3}{4}$   
 C.  $1\frac{1}{2}$   
 D. 1

7. What is the next number in the sequence? 2, 3, 7, 16, 32, \_\_\_\_\_  
 A. 57                                      B. 25  
 C. 23                                      D. 55

8. What is the square root of a difference between  $17^2$  and  $8^2$ ?  
 A. 225                                    B. 64  
 C. 289                                    D. 15

9. In the figure below line AD is parallel to line GE. Line BC is equal to line BE. Angle GFE = 44° and angle FEG = 74°.



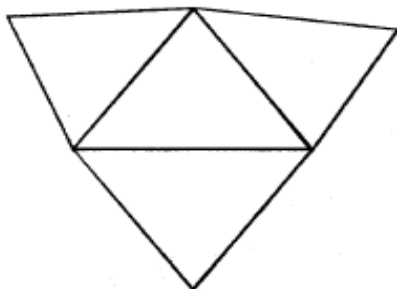
What is the size of angle ECD?  
 A. 106°  
 B. 37°  
 C. 143°  
 D. 74°

10. What is the value of  $\frac{1}{2}(x^2 + 2y) + 5z - 8$  if  $z = 4$ ,  $x = 2z$  and  $y = \frac{1}{2}x - 1$ ?  
 A. 27  
 B. 12  
 C. 10  
 D. 47

11. A maize miller processed 2.4 tonnes of maize. The maize flour was later packed into cartons each holding 12-2kg packets of maize flour. A pick-up carrying 20 cartons each trip was used to transport the flour to the supermarket. How many trips did the pickup make to transport all the flour?  
 A. 100  
 B. 5  
 C. 2400  
 D. 50

12. A meeting started at 8.55am. After four hours 15 minutes they took a lunch break of 1 hour 10 minutes. The meeting then continued for  $3\frac{3}{4}$  hours. At what time in 24 hours clock system did the meeting end?
- A. 1805hrs                      B. 6.05pm  
C. 0605 hours                  D. 6.05am

13. The figure below represent the net of a solid.



The net is folded to form a solid. How many edges and vertices will the solid have?

- |    |   |   |
|----|---|---|
|    | E | V |
| A. | 4 | 6 |
| B. | 4 | 4 |
| C. | 9 | 5 |
| D. | 6 | 4 |

14. The table below shows the number of pupils who attended the class in week. The class has a total of 50 pupils and the number of boys is 23.

Day	Mon	Tue	Wed	Thur	Fri
Girls	24	25	22	23	26
Boys	20	21	19	21	23

What was the total number of the absentee in the whole week?

- A. 28                                      B. 2274  
C. 26                                      D. 10
15. During a church service the number of the attendants was as follows
- Girls - 96  
Boys - 120  
Women - 160  
Men - 104
- If this information was put on a pie-chart, what angle would represent the difference between the number of boys and men?
- A.  $90^\circ$                                       B.  $72^\circ$   
C.  $12^\circ$                                       D.  $78^\circ$

16. At Munyere's farm the ratio of cows to goats was 3:2. There are 450 animals in his farm. How many more cows than goats are there in his farm?

- A. 270                                      B. 180  
C. 90                                        D. 150

17. In one month, Janet earned a total of sh.24 000. This included a 6% commission on all the sales above sh.100 000. If the basic salary was sh12 000. What was the value of the total sales?

- A. Sh.200 000                      B. Sh.240 000  
C. Sh.224 000                      D. Sh.300 000

18. A cylindrical tank has a radius 0.7m and a height of 0.8m. How many litres of water does it hold when three quarter full?

- A. 924 litres                              B. 92400 litres  
C. 1232 litres                              D. 123200 litres

19. Mercy, Mary, Millicent and Mariam shared some money as follows. Millicent got  $\frac{2}{3}$ . Mercy  $\frac{1}{4}$  of the remainder while Mary and Miriam shared the rest equally. What fraction of the money did Mercy and Miriam get?

- A.  $\frac{3}{8}$                                         B.  $\frac{1}{8}$   
C.  $\frac{19}{20}$                                       D.  $\frac{5}{24}$

20. The mean mass of 12 boys was 42.5kg. Eleven of the boys weighed 41, 42, 43, 41, 51, 46, 47, 43, 39, 36 and 38 kg. What is the sum of mean and median of their ages?

- A. 42.5kg                                      B. 43  
C. 85.5kg                                      D. 85kg

21. Kamau has a total of 3 600 animals. 0.25 of them are cows, 0.3 of them are sheep while 0.5 of the remainder are chicken and the rest are goats. What is the total number of goats and sheep on his farm?

- A. 810                                        B. 1 890  
C. 1 080                                      D. 900

22. At a prayer rally the number of children was three times that of men. The number of men was 180 less than that of women. If the number of children was  $x$ , which of the following equations can be used to get the number of men if the total number of attendants was 360?

- A.  $5x - 540 = 1080$
- B.  $5x + 540 = 1080$
- C.  $2\frac{2}{3}x + 180 = 360$
- D.  $1\frac{2}{3}x - 180 = 360$

23. What is the value of  $x$  in the equation

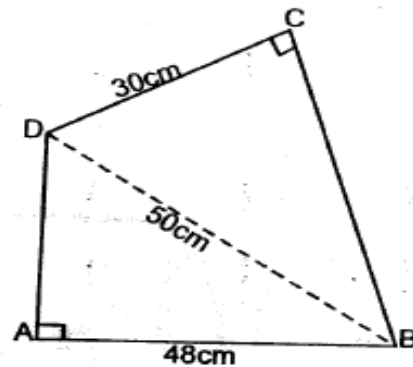
$$\frac{x}{5} + \frac{2(2x+3)}{4} = 15 ?$$

- A.  $13\frac{3}{4}$
- B.  $11\frac{1}{4}$
- C. 3
- D.  $12\frac{1}{2}$

24. Omunga delivered milk to the dairy from 13th January 2016 to 18th May the same year. For how many days did he supply the milk?

- A. 126
- B. 127
- C. 128
- D. 125

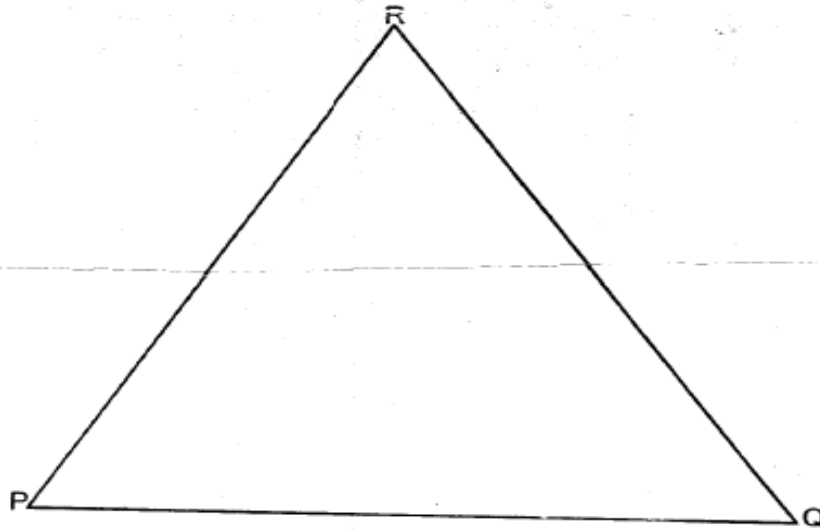
25. The diagram ABCD below is formed by two right angled triangles joined together.



What is the perimeter of the figure ABCD?

- A. 182cm
- B. 168cm
- C. 128cm
- D. 132cm

26. On the triangle PQR drawn below, drop a perpendicular from point R to meet line PQ at  $x$ . Construct a bisector of angle PQR to meet the perpendicular line at  $y$ .



What is the size of angle RYQ?

- A.  $64^\circ$
- B.  $116^\circ$
- C.  $28^\circ$
- D.  $126^\circ$

27. The table below shows the rates for sending money by money order

	Ordinary money order	Telegraphic money order
Upto 500	63.00	94.00
501 - 1000	102.00	138.00
1001 - 2500	143.00	196.00
2501 - 5000	174.00	225.00
5001 - 10000	196.00	269.00
10001 - 20000	215.00	305.00

Njagi sent sh.12 500 to her daughter by ordinary money order and also sent shilling 7800 by telegraphic money order. How much money did he pay at the post office?

- A. Sh.20 784                      B. Sh.20 300  
C. Sh.20 515                      D. Sh.484
28. A businessman deposited sh.300 000 in a commercial bank that pays 6% compound interest per year. How much was in his account after two year?
- A. Sh.318 000                      B. Sh.337 080  
C. Sh.336 000                      D. Sh.37 080
29. On a map of scale 1:20000 represent a rectangular plot of land that measures 3cm by 2cm. What is the actual area of the plot in hectares?
- A. 240 000                          B. 2 400  
C. 24                                  D. 0.24
30. The number of pupils in a certain school increased by 30% in 2018 from the number in 2017. If there are 390 pupils in 2018, how many pupils were there in 2017?
- A. 507                                  B. 330  
C. 360                                  D. 300
31. Below are properties of a certain quadrilateral.
- (i) the diagonals have varied lengths.  
(ii) has all the sides equal.  
(iii) has all the sides equal.  
(iv) diagonals bisect each other.  
(v) has two pairs of parallel line.
- The quadrilateral described above is
- A. rhombus                          B. square  
C. rectangle                        D. parallelogram

32. Wanyama bought the following items from a kiosk.

3-2kg packet of wheat flour at sh.65 per kg.

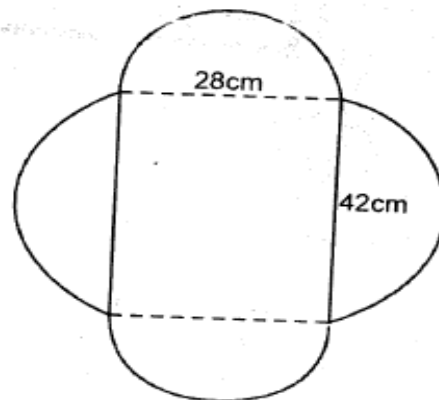
4kg sugar @sh.130

2½kg rice @sh.120

1½kg ndengu for sh.330

If he paid using 4-500shillings notes, how much balance did he get?

- A. Sh.460                              B. Sh.1 540  
C. Sh.1 705                            D. Sh.295
33. A motorist left Embu to Ishiara a distance of 160km driving at an average speed of 80km/hr. After driving for 1 hour the car got a puncture and took 20 minutes to change the wheel. If he was to arrive at the expected time, at what speed should he drive the remaining distance?
- A. 120km/h                          B. 60km/h  
C. 100km/h                          D. 96km/h
34. The figure below shows a table mat made of a rectangle joined to four semi circles. The rectangle measures 42cm by 28cm.



What is the perimeter of the table mat?

- A. 360cm  
B. 220cm  
C. 140cm  
D. 144cm

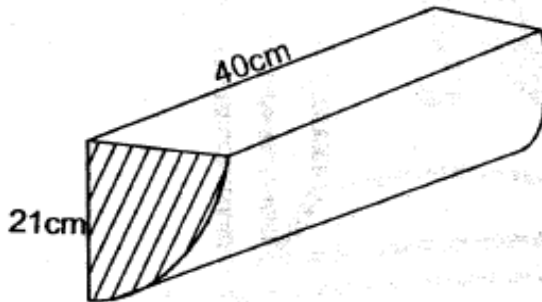
35. A company hired 24 men to complete a piece of work in 5 hours. If four of the workers did not turn up how much longer did it take to complete the work?

- A. 1 hour                      B. 6 hours  
C. 4 hours                      D. 8 hours

36. Construct a parallelogram JKLM such that line JK=6.5cm and line KL=5.5cm. Angle JKL=65°. What is half the length of the shorter diagonal?

- A. 6.6cm  
B. 10.2cm  
C. 5.1cm  
D. 3.3cm

37. The figure below shows a quarter cylindrical block of wood.



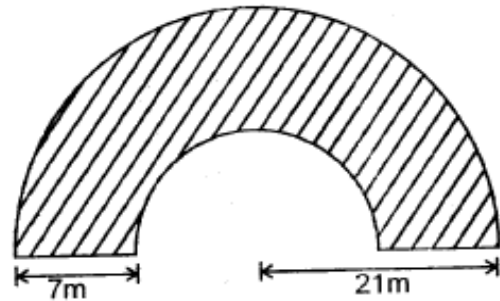
What is its volume?

- A. 55440cm<sup>3</sup>  
B. 27720cm<sup>3</sup>  
C. 27820cm<sup>3</sup>  
D. 13860cm<sup>3</sup>

38. A Kisumu bound bus started the journey from Mombasa at 1605 hrs Monday. If the journey took  $1\frac{1}{3}$  days, what day and time did it reach Kisumu in 24hrs system?

- A. 2405 hrs Tuesday  
B. 005hrs Wednesday  
C. 1205am Wednesday  
D. 1205am Tuesday

39. The figure below shows a parade ground of Inchoroi primary school. The shaded area is where the pupils stand while in parade.



What is the area taken by pupils while on parade ground?

- A. 1386  
B. 770  
C. 616  
D. 385

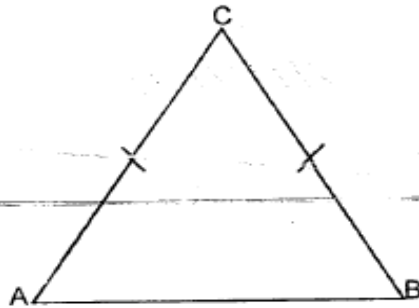
40. The table below shows the distance in km to different town through Nyeri-Nyahururu route

Nyeri					
14	Mweiga				
26	16	Nairutia			
42	26	16	Jikaze		
66	47	24	8	Gwa Kung'u	
88	74	52	36	12	Nyahururu

Njeri travelled from Nyeri to Nyahururu and later back to Nairutia. How many kilometre did he cover

- A. 88  
B. 52  
C. 140  
D. 156

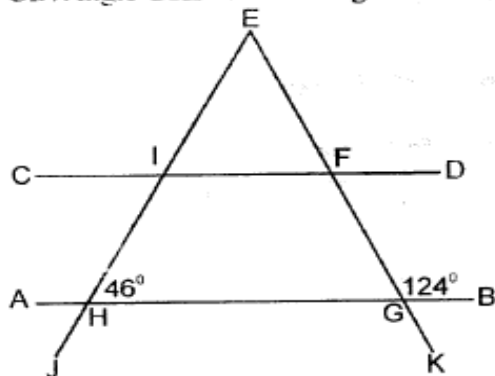
41. An isosceles triangle  $ABC$  below has a perimeter of 96m.



The base of the triangle is 36cm. What is its area?

- A.  $432\text{m}^2$   
 B.  $864\text{m}^2$   
 C.  $720\text{m}^2$   
 D.  $360\text{m}^2$

42. In the figure below line  $AB$  is parallel to line  $CD$ . Angle  $GHI=46^\circ$  and angle  $BGF=124^\circ$



What is the size of angle  $CIE$ ?

- A.  $124^\circ$   
 B.  $56^\circ$   
 C.  $78^\circ$   
 D.  $134^\circ$

43. Which of the following expression is the simplest form of

$$\frac{7}{8}(24y - 16z) - \frac{3}{5}(20y - 15z) ?$$

- A.  $33y - 23z$   
 B.  $33x - 5z$   
 C.  $9y - 5z$   
 D.  $9y - 23z$

44. Nelly bought  $y$  oranges. Neema bought a third of Nelly while Nelius bought twice as much as Nelly and Neema. How many oranges in total did they buy?

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

45. The marked price of a generator is sh.16000.

The hire purchase price is 25% more than the marked price. The cash price is 90% of the marked price. Njoroge bought the generator on cash while Njeri bought it on hire purchase. How much more than Njoroge did Njeri pay for the generator?

- A. Sh.20 000                      B. Sh.5 600  
 C. Sh.14 400                      D. Sh.4 600

46. Ochienku paid sh.34 800 for a TV set after getting 13% discount. How much less would he have paid if he was given a 17% discount?

- A. Sh.33 200                      B. Sh.1 600  
 C. Sh.30 270                      D. Sh.4 524

47. Wangira had 13-1000 shillings notes, 16-500 shilling notes, 18-200 shilling notes and 30-50 shilling notes. He decided to change all the money into 50 shilling notes. How many notes did he get?

- A. 26 100                      B. 261  
 C. 522                      D. 5220

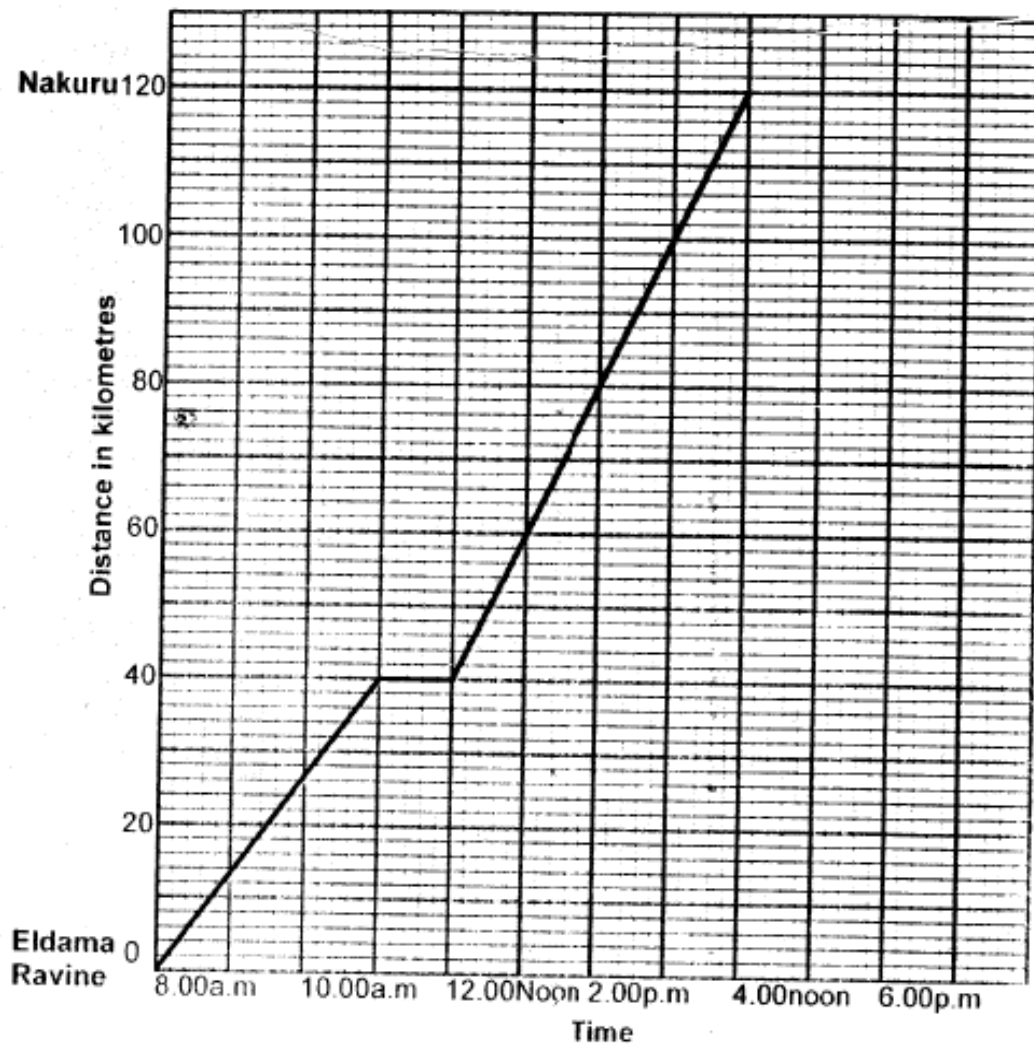
48. A watch loses 5 seconds every hours. It was set right on Tuesday 8.40am. What time did it show on Saturday the same week at 8.40pm?

- A. 8.22am                      B. 8.30am  
 C. 8.22pm                      D. 8.31pm

49. Nancy sold a dress at sh.13500 making a  $12\frac{1}{2}\%$  profit. What was the buying price of the dress?

- A. Sh.12 000                      B. Sh.12 500  
 C. Sh.1 518.5                      D. Sh.12 125

50. The graph below shows the journey by a motorist from **Eldama Ravine** to **Nakuru**. He drove for the first 40 kilometres and had a one hour stop over at **Kambi Moi**. He later drove reaching **Nakuru** at 4.00pm.



What was his average speed for the second part of the journey?

- A. 15km/h
- B. 30km/h
- C. 20km/h
- D. 25km/h