K.C.P.E SECOND TRIAL
STANDARD EIGHT 2021

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 the next number in the sequence 7, 11, 19, 31, 47 ____?

A. 65
B. 67
C. 63
D. 66

The correct answer is **B** (67)

On the answer sheet:

4 |A||B||C||D| 14 |A|■|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. What is 8 346 524 in words?
   A. Eight million three hundred and forty six thousand, five hundred and twenty four.
   B. Eighty three million forty six thousand five hundred and twenty four.
   C. Eight hundred and thirty four thousand six hundred and fifty two and four tenth.
   D. Eighty three million four hundred and six thousand and twenty four.

2. What is the value of $\dfrac{3(6^2 - 4^2)}{4 \times 15} + 8$?

   A. 1   B. 9
   C. 12   D. 60

3. What is 4 899.84 rounded off the nearest whole number?
   A. 4 899   B. 4 899.8
   C. 7 890   D. 4 900

4. What is the LCM of 18, 24 and 36?
   A. 6   B. 72
   C. 144   D. 108

5. What is the sum of the total values of digit 2 and digit 7 in the number 4 265 785?
   A. 200 000   B. 700
   C. 200 700   D. 265 700

6. Hassan bought the following items from a shop.
   3 packets of maize flour at sh. 110
   2kg rice for sh. 210
   1½kg of ndengu at Sh. 140
   2 loaves of bread at sh. 55
   If he paid using 2-500 shilling notes, how much balance did he get?
   A. Sh. 140   B. Sh. 860
   C. Sh. 199   D. Sh. 805

7. What is the value of x in the equation?
   $\dfrac{4(x+1)}{2} + = 6$?
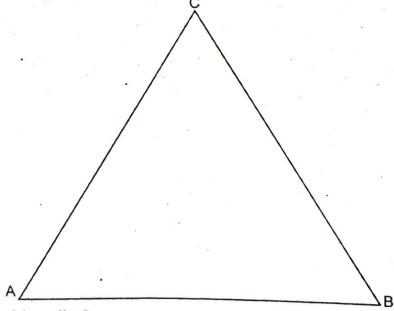   A. 4   B. 2
   C. 3   D. 1

8. The area of a square is 3 364m². What is the length of one side of the square?
   A. 1 682   B. 58
   C. 841   D. 52

9. What is the **CORRECT** order of writing the fractions $\dfrac{2}{3}, \dfrac{1}{2}, \dfrac{3}{5}, \dfrac{4}{7}$ from the smallest to the largest?

   A. $\dfrac{2}{3}, \dfrac{3}{5}, \dfrac{4}{7}, \dfrac{1}{2}$ B. $\dfrac{1}{2}, \dfrac{2}{2}, \dfrac{3}{5}, \dfrac{4}{7}$

   C. $\dfrac{1}{2}, \dfrac{4}{7}, \dfrac{3}{5}, \dfrac{2}{3}$ D. $\dfrac{4}{7}, \dfrac{3}{5}, \dfrac{2}{3}, \dfrac{1}{2}$

10. In the triangle ABC below, draw a bisector of angle **ABC** and angle **BCD**. Join the two bisectors and let them meet at **x**. Let point **x** be the centre of the circle and draw a circle touching the sides **ABC**.

What is the length of the radius?
A. 2.5cm   B. 5cm   C. 4.2cm   D. 8.4cm

STD 8 MATHS 002 2021

11. A rectangular piece of land measures 215m by 65m. Fencing posts are put at an interval of 5m. How many posts are required to fence?

A. 56   B. 280

C. 560   D. 112

12. Okello bought a jacket for sh. 1 350 after getting a 10% discount. What was the marked price of the jacket?

A. Sh. 1 215   B. Sh. 1 650

C. Sh. 1 500   D. Sh. 1 800

13. The table below shows the number of crates of a soda delivered in a depot for six days.

Days	Mon	Tue	Wed	Thur	Fri	Sat
No of crates	24	32	18	25	27	33

What was the median sale in that week?

A. 27   B. 18

C. 33   D. 26

14. Nyar Gem and Jar Kisumu shared some money in the ratio 2:3. How much more money did Jar Kisumu get than Nyar Gem if they shared Sh. 8 400 in total?

A. Sh. 3 360   B. Sh. 1 680

C. Sh. 5 040   D. Sh. 4 200

15. What is the value of $\dfrac{0.6 + 0.4 \div 0.25}{0.2}$?

A. 2.2   B. 4.4

C. 11   D. 3.6

16. Which of the following statement is **NOT** **TRUE** about a square?

A. All sides are equal.

B. Has two pairs of parallel sides.

C. All interior angles are equal.

D. Diagonals are not equal.

17. Kamau had the following denominations of money.

2 - 1 000 shillings notes

12 - 500 shilling notes

8 - 200 shilling notes.

12 - 100 shilling notes

He decided to change all the money into fifty shilling notes How many notes did he get in total?

A. 408   B. 216

C. 10 800   D. 108

18. On a map a road of 12km is represented by 6cm. What is the scale used?

A. 1:2 000   B. I: 20 000

C. 1: 200 000   D. 1: 2 000 000

19. What is the simplest form of

$$6\left(\frac{2}{3}x + \frac{1}{6}y\right) + \frac{2}{3}\left(6x - \frac{1}{2}y\right) \ ?$$

A. $8x + 2y$ B. $6x$

C. $4x + 2y$ D. $8x$

20. A rectangular plot has a diagonal of 170m. If the lenth is 150m, how long is the width?
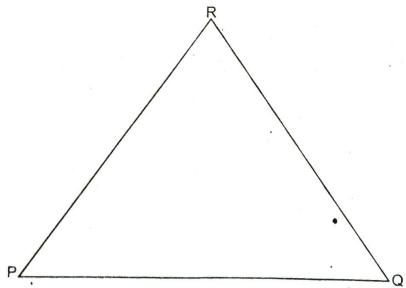
A. 120m   B. 160m

C. 80m   D. 270m

21. The triangle **PQR** below is drawn to scale.

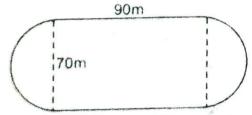What is the size of angle **QPR**?

A. 55°   B. 74°   C. 68°   D. 52°

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22. Ogello is paid sh. 14 375 after working for 25days. How much does he earn for working 12 days?
- A. Sh. 575
- B. Sh. 6 900
- C. Sh. 11 500
- D. Sh. 5 750

23. A meeting was attended by 600 people. Out of these 0.14 were men, 0.2 were women and the rest were youth. How many youths were there?
- A. 84
- B. 204
- C. 120
- D. 396

24. Terry is twice as old as Tracy but eight years younger than Triza. If Tracy is y years old, what will be the sum of their ages in 6 years to come?
- A. $5y + 26$
- B. $5y + 8$
- C. $4y + 26$
- D. $4y + 18$

25. A family uses 2 - 500ml packets of milk daily. How many litres of milk does the family consume in the month of January, February and March of a leap year?
- A. 92 litres
- B. 90 litres
- C. 89 litres
- D. 91 litres

26. What is the square root of 0.0016?
- A. 0.0004
- B. 0.004
- C. 0.04
- D. 0.4

27. Kiprono ran round the track 7½ times.

90m

70m

How many kilometres did he cover?
- A. 3
- B. 30
- C. 300
- D. 3 000

28. Wanjala bought a cow at Sh. 14 000. During the dry season he sold it making a 15% loss. At what price did he sell the cow?
- A. Sh. 11 900
- B. Sh. 16 100
- C. Sh. 2 100
- D. Sh. 12 150

29. A wheel of radius 28cm makes 2 000 revolutions. How many kilometres does it cover?
- A. 325 000km
- B. 3 520km
- C. 352km
- D. 3.52km

30. What is the value of

$$\frac{1}{2} + \frac{1}{2}\left(\frac{1}{3} - \frac{1}{6}\right) \text{ of } \frac{2}{3} \div \frac{1}{4} \ ?$$
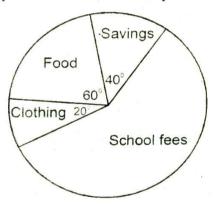
- A. $\frac{13}{18}$
- B. $\frac{5}{18}$
- C. $\frac{13}{24}$
- D. $\frac{12}{17}$

31. Kawira bought 60 mangoes @ sh. 5 each. She spent sh. 100 on transport. During transportaion, 10 mangoes got spoilt and sold the rest at sh. 12 each. How much profit did she make?
- A. Sh. 300
- B. Sh. 200
- C. Sh. 150
- D. Sh. 400

32. Line **AB** below is part of a Rhombus. Angle **ABC** = 65°. Complete the Rhombus. What is the length of diagonal **BD**?
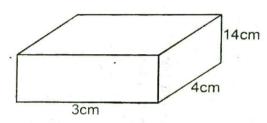

A ————————————— B

A. 5.8cm   B. 4cm   C. 10.3cm   D. 8.6cm

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33. A bus left Mombasa on Tuesday at 8:30pm. It took 8 hours 45min to reach Nairobi. On what day and time did it get to Nairobi?
A. Wednesday 0515hrs
B. Wednesday 1715hrs
C. Tuesday 1515hrs
D. Tuesday 0315hrs

34. The pie chart below shows how Mkulima spent his sh. 36 000 salary.

How much did he save?
A. 6 000   B. 4 000
C. 2 000   D. 24 000

35. A car travelled a distance of 216km in 3 hours hours and later covered another 144km in 2 hours. What was the average speed in km per hour.
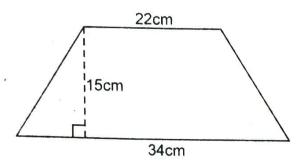A. 72km/h   B. 60km/h
C. 80km/h   D. 90km/h

36. The diagram below shows a cuboid.

Calculate the surface area.
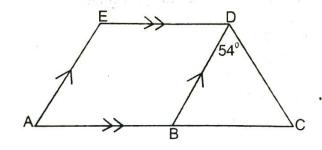A. 220cm²
B. 196cm²
C. 168cm²
D. 112cm²

37. A carton contains 36 - 500g tins of blueband. How many tonnes does such 12 cartons carry?
A. 216
B. 21.6
C. 2.16
D. 0.216

5

38. The diagram below sows a Trapezium **ABCD**

What is the area of the trapezium?

A. 840cm²   B. 420cm²
C. 510cm²   D. 255cm²

39. A tank had water upto ¼ full. When 120 litres of water were drawn from the tank, it became ½ full. What was the capacity of the tank?

A. 160 litres
B. 480 litres
C. 360 litres
D. 340 litres

40. At a prayer rally 2 800 men attended. The number of women was 1 800 more than that of men but 3 200 less than that of children. How many people attended the rally?

A. 15 200
B. 10 600
C. 7 400
D. 7 800

41. In the figure below **ABCDE** is a rhombus and **BCD** is a triangle. Angle BDC = 54⁰ and line **BD** = line **BC**.

What is the size of angle **DEA**?
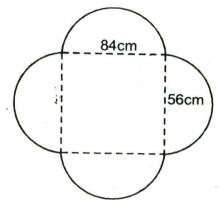
A. 63⁰   B. 68⁰
C. 117⁰   D. 78⁰

42. The table below shows the charges of sending money via money order.

Range	Charged
upto - 1000	110
1001 - 2500	165
2501 - 5000	225
5001 - 10000	285
10001 - 20000	355

Njagi sent two money orders one of sh. 12 000 and another one of sh. 7 500. How much money in total did he pay at the post office?

A. Sh. 19 500   B. Sh. 20 040
C. Sh. 640   D. Sh. 20 140

43. Kirinkai is paid a basic salary of sh. 18 000 and a commission of 4% on all the sales he makes. How much money did he earn in a month he sold goods worth sh. 480 000.

A. Sh. 19 200
B. Sh. 18 000
C. Sh. 37 200
D. Sh. 19 920

44. What is the sixth number in the pattern 1, 4, 9, 16, _____ ?

A. 25
B. 36
C. 49
D. 29

45. The marked price of a generator is sh. 36 000 but a discount of 20% is given on cash payment. On hire purchase a deposit of sh. 6 000 and monthly instalment of sh. 3 000 for 12 months. How much more is the hirepurchase price than cash price?

A. Sh. 42 000
B. Sh. 28 800
C. Sh. 12 000
D. Sh. 13 200

46. The table mat below is made up of rectangular cloth joined to a semi-circular ones.

What is the area of the table mat?
A. 12 712cm²
B. 8 808cm²
C. 4 704cm²
D. 8 710cm²

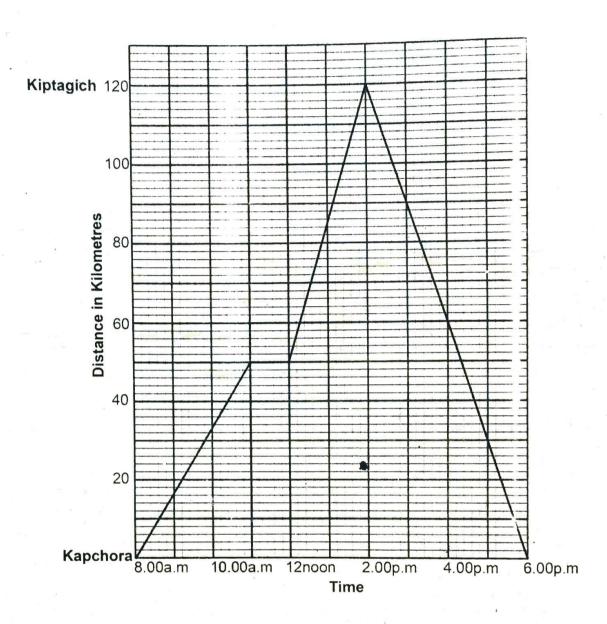**47.** The table below shows the number of crates of bread sold by a supplier.

DAY	MON	TUE	WED	THUR	FRI	SAT	SUN
No. of crates sold	16	15	7	6	13	8	12

If a crate holds 15 breads, how many breads did he sell that week?
A. 77
B. 1155
C. 1005
D. 67

48. The mass of an empty lorry is 7.2 tonnes. When loaded with 60 bags of maize each with a mass of 90kg and 45 bags of rice each of mass 50kg. What is the mass of loaded lorry in tonnes?
A. 14.85 tonnes
B. 7 650 tonnes
C. 7.65 tonnes
D. 14 850 tonnes

49. The number of road accidents recorded in the country in the year 2019 was 17 000. In the year 2020 the number decreased to 14 450. What was the percentage decrease?
A. 17½%
B. 85%
C. 15%
D. 20%

50. The graph below shows the journey by Kipkewewe from Kapchorua to Kiptagich and back.

What was the average speed for the whole journey?
A. 12km/h
B. 30km/h
A. 24km/h
A. 40km/h