

MERIT 007



TARGETER KCPE PREDICTION ONE STANDARD EIGHT - YEAR 2021

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 the question booklet.

HOW TO USE THE ANSWER SHEET.

4. Use 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.

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.

9. 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:

31. Find the value of 0.04

- A. 0.16
- B. 0.00016
- C. 1.6
- D. 0.0016

The correct answer is D.

On the Answer sheet:

1 [A] [B] [C] [D] **11** [A] [B] [C] [D] **21** [A] [B] [C] [D] **31** [A] [B] [C] [D] **43** [A] [B] [C] [D]

In the set of boxes number 31, the box with 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.,



1. Which one of the following is 80600304 in words?
- A. Eight million six hundred thousand three hundred and four.
- B. Eighty million six hundred thousand three hundred and four.
- C. Eight hundred and six thousand three hundred and four.
- D. Eighty million sixty thousand three hundred and four.

2. What is the quotient of the total value of digit 8 and the total value of digit 4 in the number 5876.9462?
- A. 800.04
- B. 799.96
- C. 2000
- D. 20000

3. What is the value of $9 + 3 \div (18 + 6) \times 48$?
- A. 24
- B. 65
- C. 15
- D. 68

4. What is the value of $\frac{\frac{2}{5} \div 1\frac{2}{3} \text{ of } \frac{3}{4}}{\frac{1}{2} - \frac{1}{5}}$?
- A. $\frac{3}{5}$

B. $\frac{9}{50}$

C. $\frac{27}{100}$

D. $1\frac{1}{15}$

5. The fractions $\frac{5}{7}, \frac{4}{9}, \frac{3}{5}$ and $\frac{2}{3}$ are to be arranged in descending order. Which of the following is the correct order?

A. $\frac{4}{9}, \frac{3}{5}, \frac{2}{3}, \frac{5}{7}$

B. $\frac{4}{9}, \frac{5}{7}, \frac{3}{5}, \frac{2}{3}$

C. $\frac{5}{7}, \frac{2}{3}, \frac{3}{5}, \frac{4}{9}$

D. $\frac{2}{3}, \frac{3}{5}, \frac{5}{7}, \frac{4}{9}$

6. What is the value of $\frac{12^2 + 12}{12} - 12$?

A. 0

B. 13

C. 132

D. 1

7. A milk vendor had milk in three containers: 24 litres, 36 litres and 15 litres. Milk in each container was repacked into smaller containers of equal capacity. What was the capacity of the largest packet used to repack the milk?

A. 3L

B. 360L

C. 6L

D. 75L

8. What is the value of $\frac{3.6 \times 4.8 \times 5.1}{1.8 \times 0.24 \times 0.17}$?

A. 12

B. 1200

C. 0.12

D. 120

9. In a farm 0.4 of the animals are cows, 0.2 of the remainder are sheep and the rest are goats. If there are 96 goats, how many sheep are there?
- A. 24
B. 200
C. 80
D. 48

10. The length of a rectangle is 20cm and the width is 10cm. Each side of the rectangle was increased by 20%. What was the increase in the area of the rectangle?
- A. 200cm^2
B. 288cm^2
C. 40cm^2
D. 88cm^2

11. A patient was admitted in a hospital in the morning of 3rd January year 2020. He was discharged in the morning of 8th March the same year. For how many nights did he spend in the hospital?
- A. 64
B. 66
C. 65
D. 63

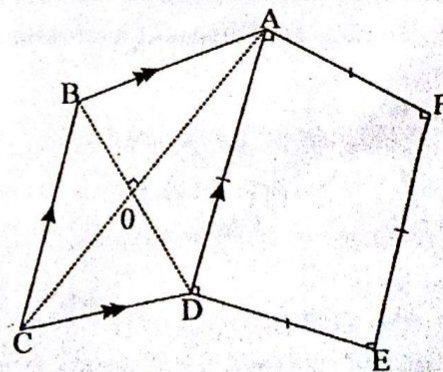
12. In a fund raising ceremony each participant contributed amount of money in shillings equal to the number of participants. If a total of shs. 422500 was contributed, how many people participated?
- A. 750
B. 650
C. 65
D. 6500

13. What is the next number in $\frac{1}{2}, 1\frac{1}{4}, 2, \dots$?
- A. $2\frac{1}{4}$
B. $2\frac{1}{2}$
C. $1\frac{3}{4}$
D. $2\frac{3}{4}$

14. What is the value of $32.6664 + 7.3333$ to the nearest thousandths?
- A. 39.999
B. 40
C. 40.000
D. 40.00

15. Which of the following statements is correct?
- A. $60\% > 0.6$
B. $2:5 < 50\%$
C. $1\frac{1}{4} > 1.25$
D. $\frac{1}{6} < \frac{1}{8}$

16. The figure below represents a vegetable garden. ABCD is a rhombus and ADEF is a square. Diagonals $AC = 16\text{m}$ and $BD = 12\text{m}$.

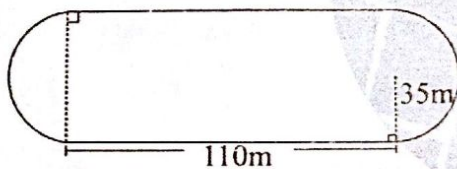


- What is the area of the garden in ares?
- A. 1.96
B. 196
C. 200
D. 2.92

17. Twenty eight - 5dl packets were emptied in a 30 litre container. How many more such packets are needed to fill the container?
- A. 32
B. 160
C. 140
D. 60

18. An empty lorry weighs 3.8 tonnes and 7.3 tonnes when loaded with packets of cement each 50kg. How many bags were loaded?
- A. 700
B. 70
C. 146
D. 222

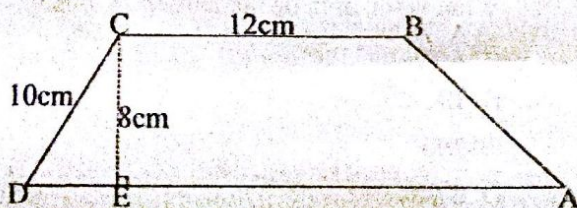
19. The figure below represents a track.



An athlete ran round the track 5 times. What distance did she cover in kilometres?

- A. 2200
B. 1650
C. 2.2
D. 1.65
20. A cylindrical metallic rod has a radius of 7cm and a length of 1m. What is its total surface area in cm^2 ?
- A. 4400
B. 4554
C. 352
D. 4708

21. The area of the trapezium ABCD below is 132cm^2 . $BC = 12\text{cm}$, $CE = 8\text{cm}$ and $CD = 10\text{cm}$.



What is the length of AE in cm?

- A. 27cm
B. 33cm
C. 15cm
D. 21cm

22. The following are lengths of sides of different triangles.

i) 6, 8, 10

ii) 5, 12, 15

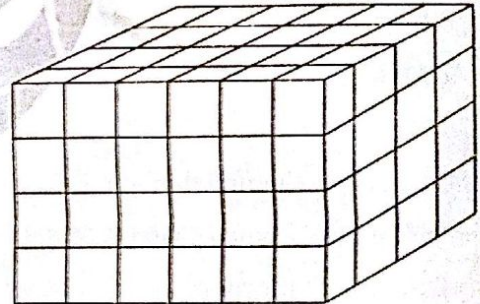
iii) 7, 24, 25

iv) 9, 16, 25

Which of the following pairs below contains right - angled triangles?

- A. (i), (ii)
B. (ii), (iii)
C. (iii), (iv)
D. (i), (iii)

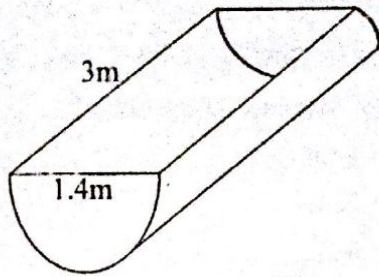
23. The following stack was dipped in paint.



How many cubes were not painted at all?

- A. 96
B. 8
C. 16
D. 24
24. Karani and Maina left town A at 8.00a.m. for town B. Karani drove at an average speed of 80km/hr. He arrived at town B at 1.00p.m. Maina drove at an average speed of 68km/hr. How far from town B was Maina when Karani arrived at town B?
- A. 400km
B. 60km
C. 340km
D. 68km

25. The figure below is a water trough.



What is the volume in cm^3 ? (Take $\pi = \dots$)

- A. 2.31
- B. 23.1
- C. 231000
- D. 2310000

26. What is the value of $\frac{2p-3}{3} - \frac{2p}{5} = 3$?

A. $7\frac{1}{2}$

B. 15

C. $3\frac{3}{4}$

D. 10

27. In a bus there were w women passengers. The number of youth passengers in the bus was four times that of women but 12 more than men passengers. The total number of passengers in the bus was 50. Which of the following equations represents this information?

A. $9w + 12 = 50$

B. $4x + 12 = 50$

C. $4w - 12 = 50$

D. $9w - 12 = 50$

28. Given that $w = 4$, $x = 3$ and $y = 2$, what is the value

of $\frac{18w + 6x}{6y + 3}$?

A. 12

B. $2\frac{1}{2}$

C. 6

D. 18

29. What is $\frac{2(3r+3) + 6r + 6}{3(4r+2) + 9}$ expressed in simplest form?

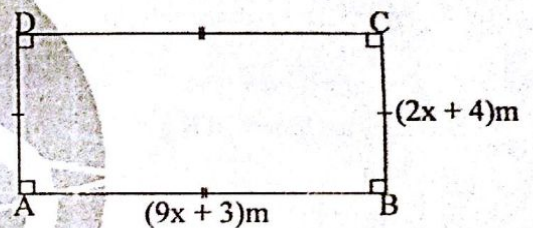
A. $\frac{4r+4}{4r+5}$

B. $\frac{r+4}{r+5}$

C. $\frac{12r+12}{12r+15}$

D. $\frac{r+1}{r+5}$

30. The figure below represents a piece of land whose perimeter is 124m.



What is the length of diagonal AC in metres?

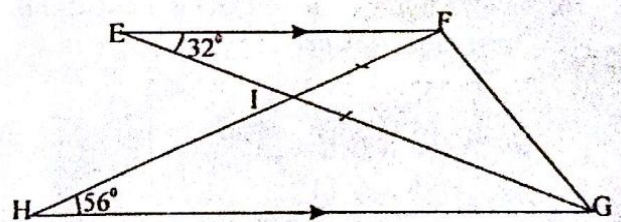
A. 48

B. 50

C. 14

D. 52

31. In the figure below line EF is parallel to line GH. Lines EG and FH are transversals. Angle $FEG = 32^\circ$ and $FHG = 56^\circ$.



What is the size of angle FGH?

A. 78°

B. 92°

C. 46°

D. 88°

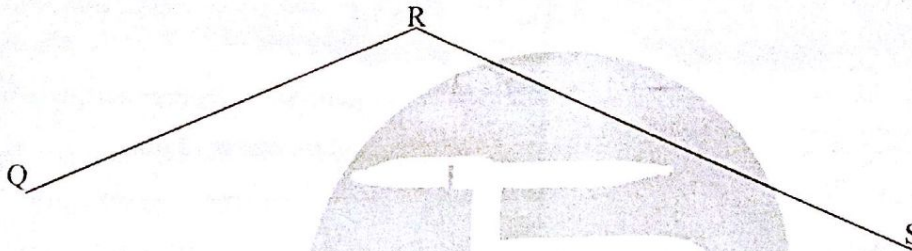
32. Milk was packed in a packet with a triangular base. Which of the following is true about the packet?

	Faces	Edges	Vertices
A.	5	8	5
B.	5	9	6
C.	6	12	8
D.	4	6	4

33. Construct a triangle ABC such that $BC = 6\text{cm}$, angle $BCA = 50^\circ$ and angle $ABC = 80^\circ$. Draw a circle touching the three edges. What is the diameter of the circle?

- A. 1.8cm
- B. 3.9cm
- C. 3.6cm
- D. 7.8cm

34. On the line below draw perpendicular bisectors of line QR and line RS to meet at point W.



What is the length of RW?

- A. 4cm
- B. 8.7cm
- C. 2cm
- D. 7.9cm

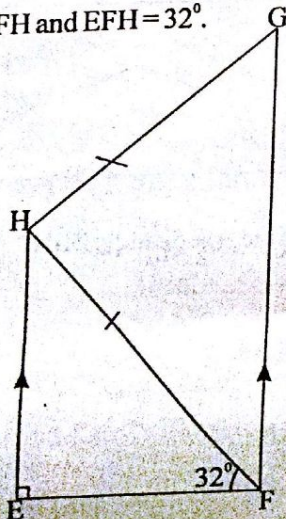
35. The following are properties of quadrilaterals.

- i) All angles are equal.
- ii) Has a pair of parallel sides.
- iii) Diagonals bisect at 90° .
- iv) Opposite sides are equal.
- v) Some angles are equal.
- vi) Co-interior angles add upto 180°

Which properties are true about a rhombus and a parallelogram?

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

36. In the figure below EFGH is a trapezium, $GH = FH$ and $\angle EFH = 32^\circ$.



What is the size of angle FHG?

- A. 58°
- B. 116°
- C. 64°
- D. 122°

37. A shopkeeper sold an item for shs. 540 making a loss of 10%. For how much would he sell it to make a profit of 20%.

- A. shs. 600
- B. shs. 720
- C. shs. 594
- D. shs. 648

38. Amina bought a dress whose price was reduced by shs. 240. If this represented a discount of 12%, how much did she pay for the dress?

- A. shs. 1760
- B. shs. 28.80
- C. shs. 2000
- D. shs. 2880

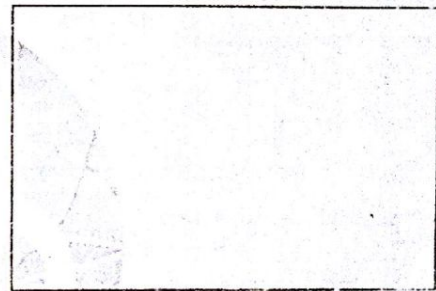
39. John borrowed shs. 40,000 from a bank that charged a compound interest at a rate 10% p.a. How much did he pay back after $1\frac{1}{2}$ years?
 A. shs. 46000
 B. shs. 6200
 C. shs. 46200
 D. shs. 6000
40. A sales agent is paid a basic salary of shs. 18,000 plus a 6% commission on value of goods sold above shs. 5000. In one month he earned a total of shs. 30000. What was the value of goods sold?
 A. shs. 200,000
 B. shs. 21000
 C. shs. 230000
 D. shs. 250000
41. The marked price of a T.V. set is 20000 but a 10% discount is allowed on paying cash. The hire purchase price involves a deposit of shs. 6000 and eleven equal monthly instalments each shs. 2,000. How much more does one pay on hire purchase than on cash?
 A. shs. 28,000
 B. shs. 10,000
 C. shs. 18,000
 D. shs. 46,000
42. The table below shows the postal rates for sending money order.

Value of order (shs)	Commissioner (shs)
Not exceeding 500	42.00
501 - 1000	114.00
1001 - 3000	174.00
3001 - 5000	209.00
5001 - 10,000	295.00
10,001 - 20000	441.00

School fee for two children in the same school was shs. 8400 and shs. 10,500. A parent bought

one money order to pay the amount. How much more would he have paid if he paid using separate money orders?

- A. shs. 19636
 B. shs. 19341
 C. shs. 295
 D. shs. 441
43. The diagram below represents a piece of land drawn to scale 1:20000.



What is its actual area in ha?

- A. 96
 B. 24
 C. 960000
 D. 9600
44. In a farm the ratio of cows to goats is 7:4. The ratio of goats to sheep is 6:2. If there are 36 sheep, how many animals are there altogether?
 A. 189
 B. 108
 C. 18
 D. 333
45. Tap A can fill a tank in 4hrs. Tap B can empty the same tank in 6hrs. If the tank is empty and both taps are opened at the same time how long will it take the tank to be filled?
 A. $2\frac{2}{5}$ hrs
 B. 12hrs
 C. 24hrs
 D. 10hrs

46. The table below shows ages of 8 pupils in a class.

Pupil	Tito	Kioko	Mary	Akinyi	Mueni	Maina	Toni	Becky
Age (years)	13	14	13	15	13	14	14	13

What is the sum of the modal and the median age?

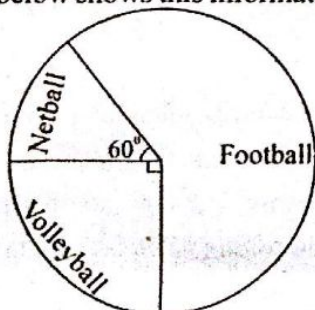
- A. $26\frac{5}{8}$
 B. $13\frac{1}{2}$
 C. $26\frac{1}{2}$
 D. 27
47. The table below shows the performance of three schools in a sport

School position	Kawa primary	Bidii primary	Viser primary
1 st position	4	3	6
2 nd position	6	2	8
3 rd position	4	9	0

3 points were awarded for 1st position, 2 points for the second position and 1 point for the third position. Which school won the competition?

- A. Bidii primary B. Kawa primary
 C. None D. Viser primary

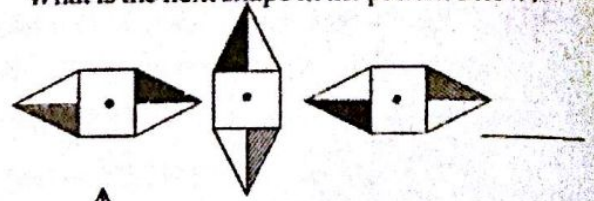
48. Pupils in a school chose their favourite game among football, volleyball and netball. The pie chart below shows this information.



How many more pupils chose volleyball than netball if 280 pupils chose football?

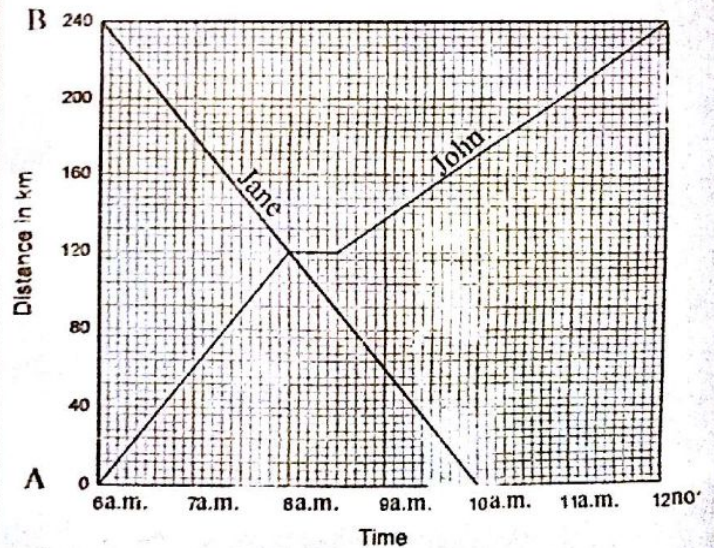
- A. 40 B. 120
 C. 80 D. 480

49. What is the next shape in the pattern below?



- A.
- B.
- C.
- D.

50. The graph below shows journey by two motorists John and Jane. John travelled from town A to B while Jane travelled from town B to A a distance of 240km.



How far apart were the two motorists at

- 8.30 a.m?
 A. 90km
 B. 120km
 C. 30km
 D. 20km