K.C.P.E FIRST 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 area of a circle whose radius is 28cm?
   A. 308cm²
   B. 2464cm²
   C. 616cm²
   D. 1232m²

The correct answer is **B** (2464cm²)

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 7 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 of the following is 3 246 254 in words?
   A. Three million two hundred and forty six thousand, two hundred and fifty four.
   B. Three hundred and forty six thousand, two hundred and fifty four hundred.
   C. Three million two hundred and fifty six thousand two hundred and fifty four.
   D. Thirty two million four hundred and six million four hundred and sixty two thousand and fifty four.

2. What is 687.879 rounded off to the two decimal place?
   A. 687.87
   B. 687.88
   C. 688.00
   D. 687.00

3. A family consumes 3-500 ml packets of milk daily. How many litres did they consume in January and February of 2021?
   A. 87 litres
   B. 90 litres
   C. 88.5 litres
   D. 91.5 litres

4. What is the place value of digit 4 in the number 364 892?
   A. Ten of thousands
   B. Hundreds of thousands
   C. Hundreds
   D. Thousands

5. What is the value of
   $3(4^2 - 2^2) - 5 \times 6 \div 2$?
   A. 21
   B. 30
   C. 45
   D. 25

6. Jasmin bought the following items from a shop.
   3 kg sugar @ sh.115.
   3kg rice @ sh.80
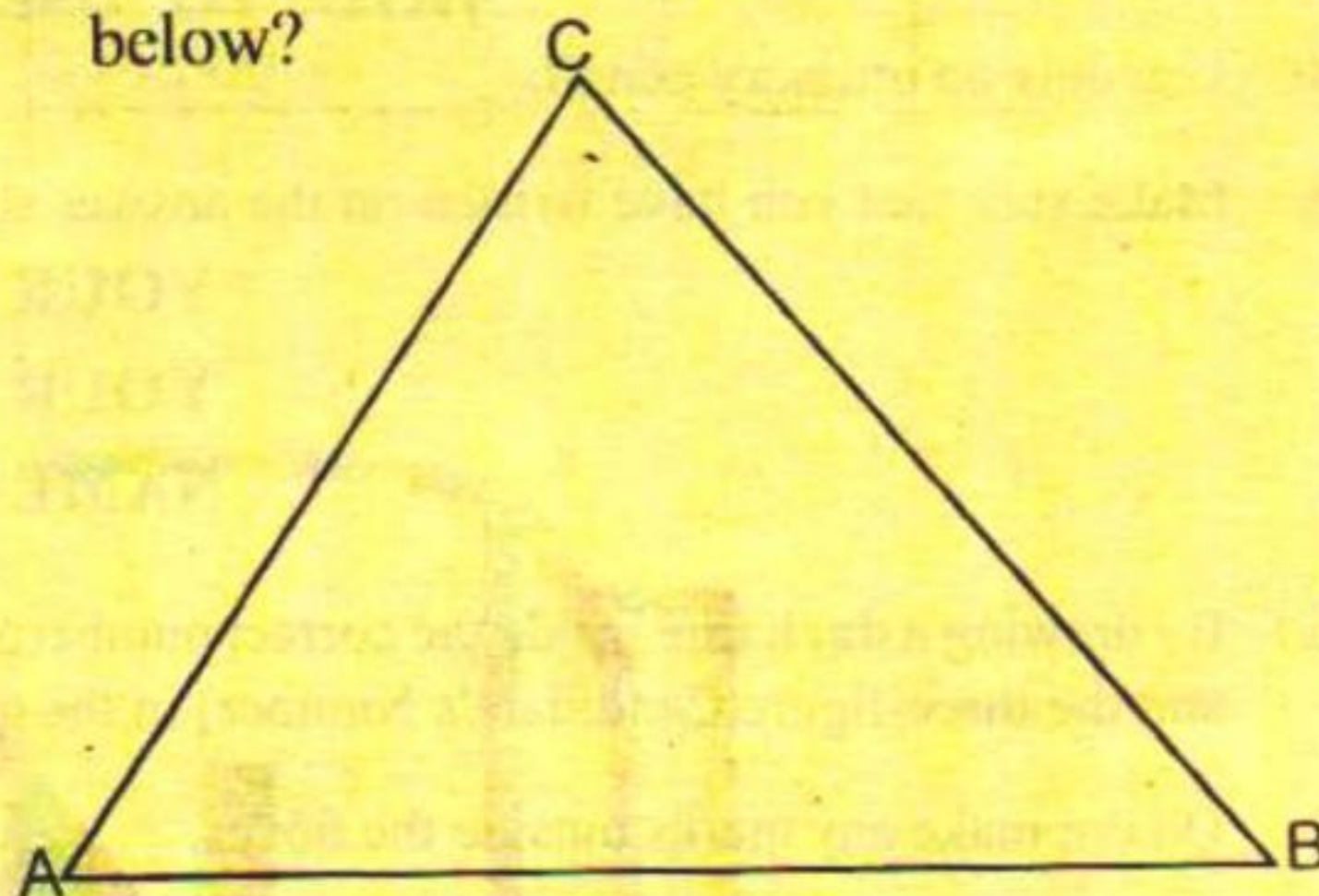   1½ kg cooking fat for sh.180
   3 packets of milk @ sh.60
   How much did he spend on the items?
   A. Sh 655
   B. Sh 945
   C. Sh 855
   D. Sh 1 035

7. What is the size of angle ABC on the triangle below?

   A. 104⁰
   B. 76⁰
   C. 59⁰
   D. 52⁰

8. What is the square of the number $1\frac{2}{3}$?
   A. $\frac{5}{3}$
   B. $\frac{25}{9}$
   C. $2\frac{7}{9}$
   D. $4\frac{1}{6}$

9. What is the next number in the sequence 2, 3, 5, 8, 13, _____?
   A. 20
   B. 19
   C. 23
   D. 21

10. What is the simplest form of
$3(x + 1) + 2(x + 4)$?

A. $5x + 11$
B. $5x + 5$
C. $6x + 10$
D. $5x + 13$

11. The table below shows the bus time table

Town	Arrival time	Departure time
A	_____	7:30 am
B	8:45 am	9:00 am
C	11:25 am	11:35
D.	12:40 pm	1:00 pm
E	2:25 pm	_____

How long did the bus take form town **B** to town **D**.

A. 3 hrs 55 min
B. 3 hrs 40 min
C. 4 hrs
D. 3 hrs 20 min

12. The perimeter of a rectangular plot is 240 metre. The length of the plot is 70m long. What is the width of the plot?

A. 100 m
B. 140
C. 50 m
D. 55

13. What is the area of a circle whose diameter is 28 cm?

A. 2 464 cm²
B. 616 cm²
C. 176 cm
D. 88 cm²

14. What is the value of $\dfrac{3}{5} \div 1\dfrac{2}{5}$ of $\dfrac{3}{4}$?

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

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

15. The marked price of a cupboard is Sh12 000. Chumo was given 15% discount, how much did he pay?

A. Sh.13 800
B. Sh. 1 800
C. Sh. 10 200
D. Sh. 18 000

16. What is the L.C.M of 12, 18 and 27?

A. 3
B. 108
C. 216
D. 180

17. A cylindrical container has a radius of 28 cm and a height of 30 cm. What is its capacity in litres?

A. 73 920 l
B. 739.2 l
C. 73.92 l
D. 7. 392 l

18. The fractions $\dfrac{3}{8}, \dfrac{2}{5}, \dfrac{5}{8}, \dfrac{1}{2}$ are to be arranged from the **SMALLEST** to the **LARGEST**. Which one of the following is the **CORRECT** order?

A. $\dfrac{5}{8}, \dfrac{1}{2}, \dfrac{2}{5}, \dfrac{3}{8}$

B. $\dfrac{5}{8}, \dfrac{3}{8}, \dfrac{2}{5}, \dfrac{1}{2}$

C. $\dfrac{1}{2}, \dfrac{2}{5}, \dfrac{3}{8}, \dfrac{5}{8}$

D. $\dfrac{3}{8}, \dfrac{2}{5}, \dfrac{1}{2}, \dfrac{5}{8}$

19. Which of the following statements is **NOT TRUE** about a rhombus?

A. All angles are equal
B. Diagonals are not equal
C. Two pairs of parallel lines
D. Diagonals bisect at right angles.

20. The table below shows the amount of milk in litres delivered for six days

Mon	Tues	Wed	Thur	Frid	Sat
36	42	38	29	49	36

In which two consecutive days was delivered highest?
A. Tuesday and Wednesday
B. Friday and Saturday
C. Monday and Tuesday
D. Wednesday and Thursday

21. Construct a triangle **ABC** such that line **AB** = 6cm **BC**= 5.5 cm and angle **ABC** = 58⁰.

What is the length of line?
A. 8 cm
B. 4 cm
C. 5.5 cm
D. 6.5 cm

22. What is the value of **Y** in the equation
$5y + 4 = 3y + 20$?
A. 16
B. 12
C. 4
D. 8

23. How many faces and edges do a square pyramid have?
A. 4 faces 8 edges
B. 8 faces 5 edges
C. 5 faces 8 edges
D. 8 faces 4 edges

24. Twelve men can do a job in 15 days. How long would it take 6 men?
A. 30
B. 12
C. 15
D. 9

25. Which of the following sets of measurement will form a right angle?
A. 3 cm, 5 cm, 6 cm
B. 8 cm 15 cm, 17 cm
C. 12 cm, 13 cm, 16 cm
D. 6 cm, 8 cm, 12 cm

26. An empty carton has a mass of 0.5 kg. The carton is packed with 60 books each 0.375 kg. What is the mass of such 10 cartons in kg?
A. 230 kg
B. 23 kg
C. 22.5 kg
D. 225 kg

27. Susan bought a cow at sh 18 000 and later sold it making 20% profit. What was the selling price?
A. Sh 24 000
B. Sh 25 200
C. Sh 16 800
D. Sh 21 600

28. The table below shows the amount of milk delivered in one week.

Mon	Tue	Wed	Thur	Fri	Sat	Sun
68	83	67	73	58	63	83

What was the modal milk delivery?
A. 83
B. 67
C. 73
D. 58

29. Njagi deposited Shs 150 000 in a bank that paid a simple interest at the rate of 5%. How much interest did the money earn after two years?
A. Sh 15 000
B. Sh 165 000
C. Sh 7 500
D. Sh 157 500

30. In a campaign meeting there were 240 men. The number of women was twice the number of men and the number of youths was three times the sum of men and women. How many people attended the prayer rally?
A. 2 160
B. 720
C. 2 880
D. 1 440

31. The hire purchase price of a T.V is Shs. 28 000. Wanjira paid Shs.4 000 as deposit and the rest in 12 equal monthly instalments. How much was each instalments?
A. Sh 24 000
B. Sh 3 000
C. Sh 1 200
D. Sh 2 000

32. What is the length of the diagonal of a rectangle whose length is 24 cm and a width of 7 cm?
A. 26 cm
B. 28 cm
C. 25 cm
D. 19 cm

33. Work out $\sqrt{0.0169}$
A. 0.013
B. 0.13
C. 1.3
D. 13

34. A salesman earns a basic salary of 12 000. He is also paid 5% commission on all the sales he makes. In one month he solds goods worth Sh 200 000. How much did he earn in total that month?
A. Sh 12 000
B. Sh 13 000
C. Sh 22 000
D. Sh 25 000

35. On a map a distance of 8 km is represented by 4cm. What is the scale used?
A. 2 : 200
B. 2 : 2000
C. 2 : 20 000
D. 2 : 200 000

36. What is the value of
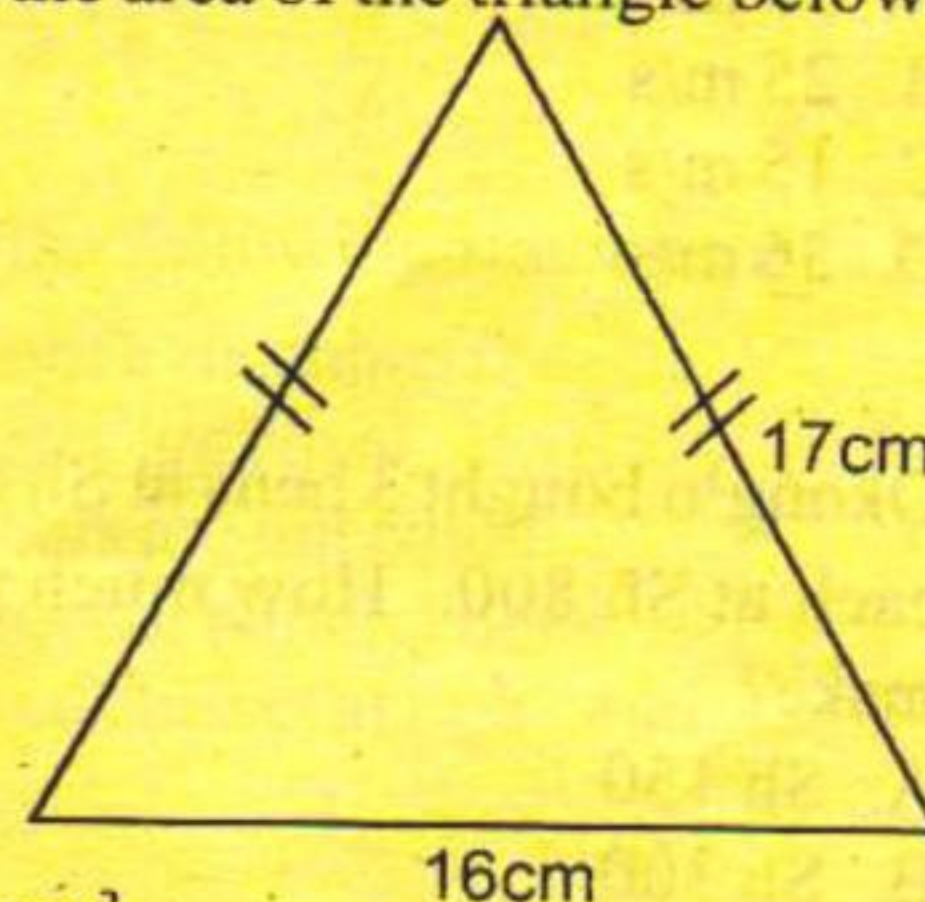$24 \div 3 + 4 \times 5 - 8 \div 4 \times 10 + 1$
A. 41
B. 9
C. 131
D. 7

37. Wanjiru bought x oranges while Atieno bought 5 oranges more than Wanjiru. Naliaka bought two times the oranges bought by Atieno. Which of the following expression shows the total number of oranges bought by them?
A. 3x + 15
B. 2x + 10
C. 3x + 10
D. 4x + 15

38. What is the area of the triangle below?

A. 120 cm²
B. 240 cm²
C. 272 cm²
D. 136 cm²

39. A tank has a volume of 2.08 m³. How many litres does it hold when half full?
A. 2 080 litres
B. 1 040 liters
C. 208 litres
D. 104 liters

40. What is the sum of G.C.D and L.C.M of 16, 20, 24?
A. 4
B. 288
C. 240
D. 244

41. Wanjala spent $\frac{1}{4}$ of the salary on food $\frac{1}{3}$ on rent, $\frac{3}{4}$ of the remainder on school fees and the rest on transport. If the salary is Sh 48 000, how much did he spend on transport?
A. Sh 24 000
B. Sh 12 000
C. Sh 5000
D. Sh 16 000

42. The area of a square is 2 500 m². What is the perimeter of the square?
A. 200 m
B. 400 m
C. 100 m
D. 300 m

43. A motorist travelled a distance of 360km in 4 hours. What was the speed in m/s?
A. 30 m/s
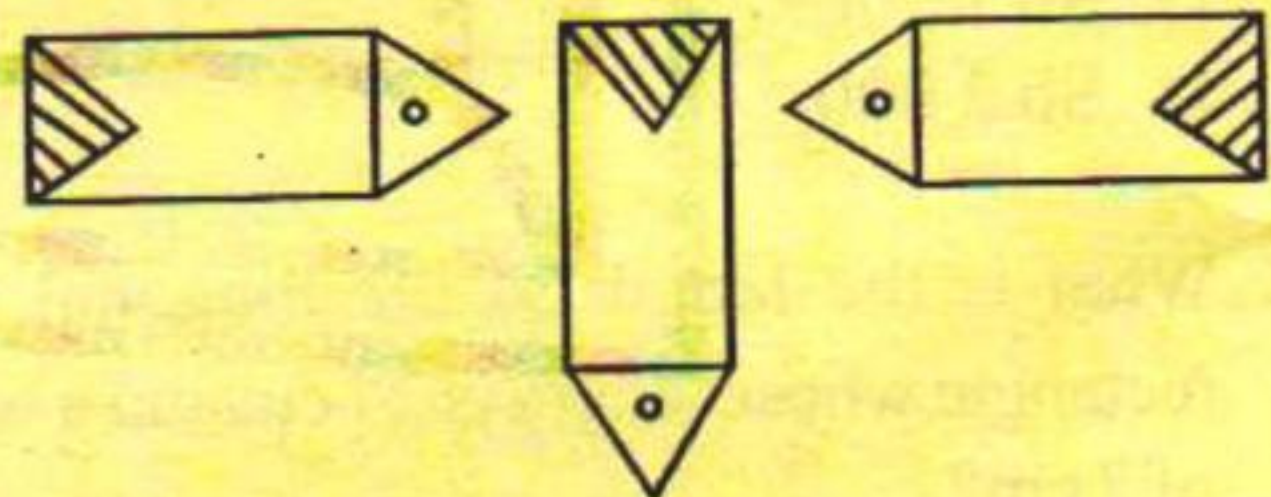B. 25 m/s
C. 15 m/s
D. 36 m/s

44. Okong'o bought 3 hens at Sh 650. He sold each at Sh 800. How much profit did he make?
A. Sh 150
B. Sh 300
C. Sh 450
D. Sh 600

45. A water tank has a volume of 28 m³. How many litres does it hold?
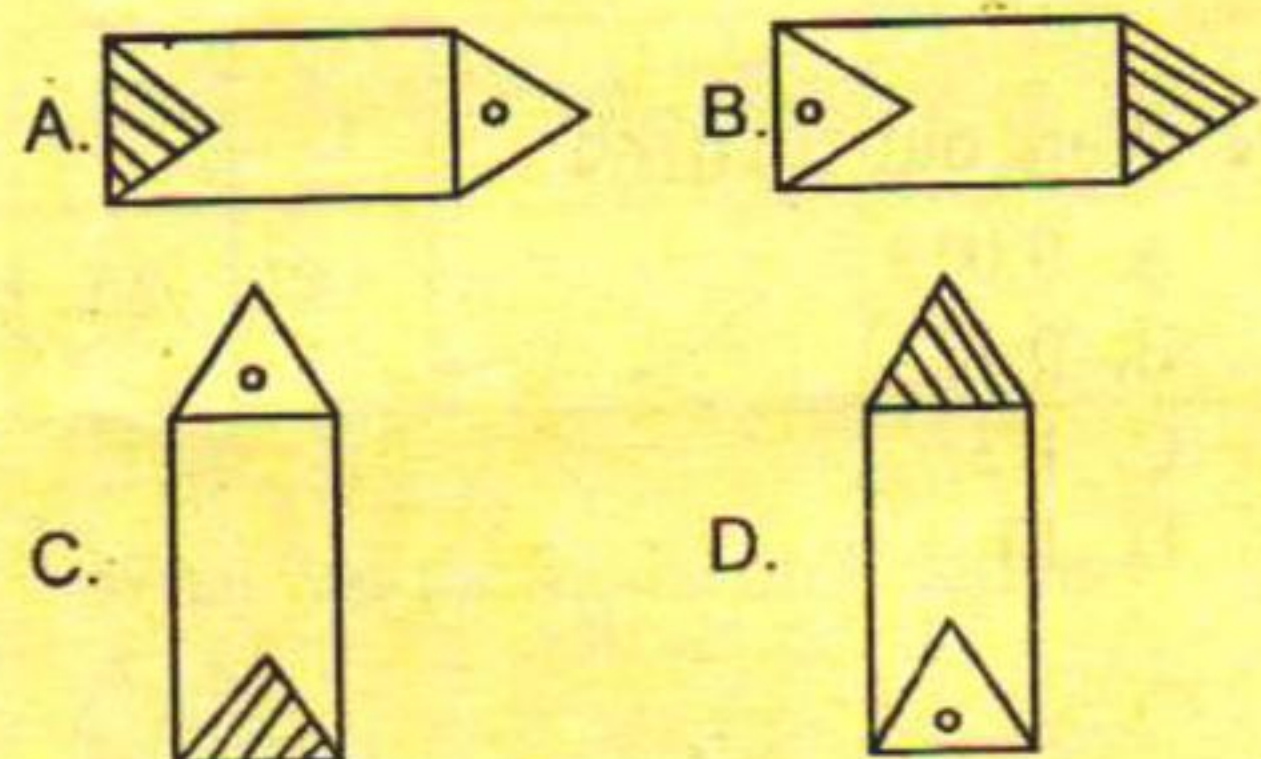A. 280 000 l
B. 28 000 l
C. 2 800 l
D. 280 l

46. A meeting started at 8:30 cm , if the meeting lasted for 6 hrs 25 mins. At what time in 24 hours system did it end?
A. 1 455hrs
B. 2: 55 pm
C. 1355 hrs
D. 3:55 pm

47. What is the surface area of an open cylinder whose radius is 21 cm and a height of 25 cm.
A. 1386 cm²
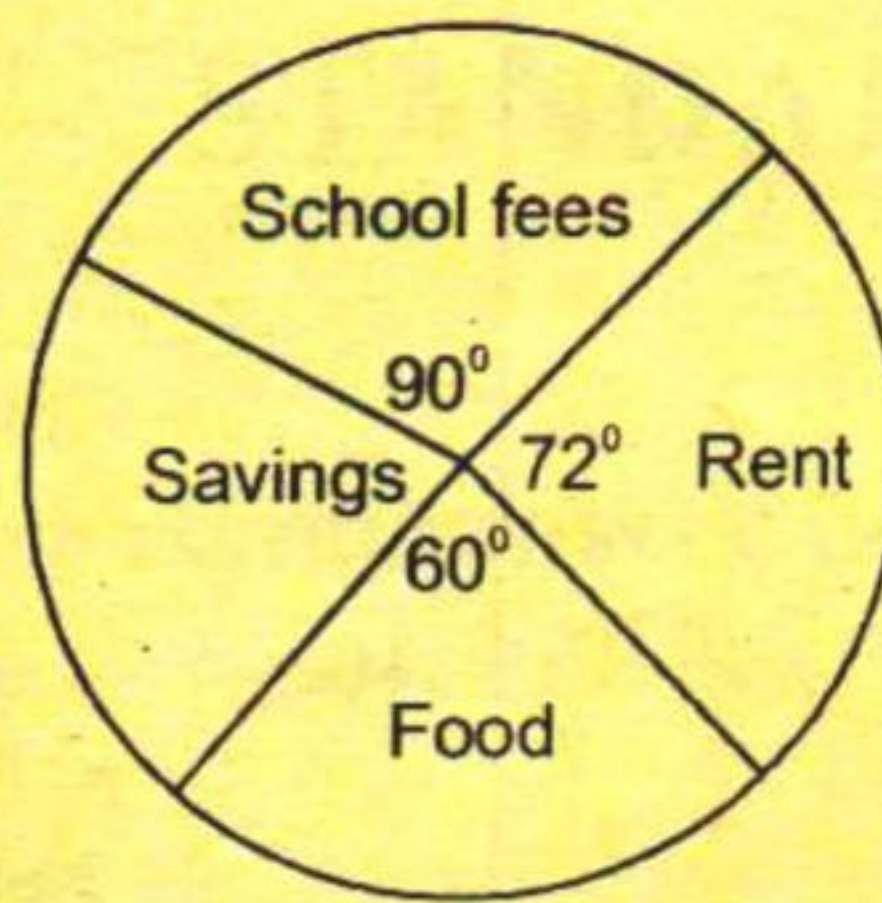B. 2772 cm²
C. 6072 cm²
D. 4686 cm²

48. The figure below shows a pattern of the shape?

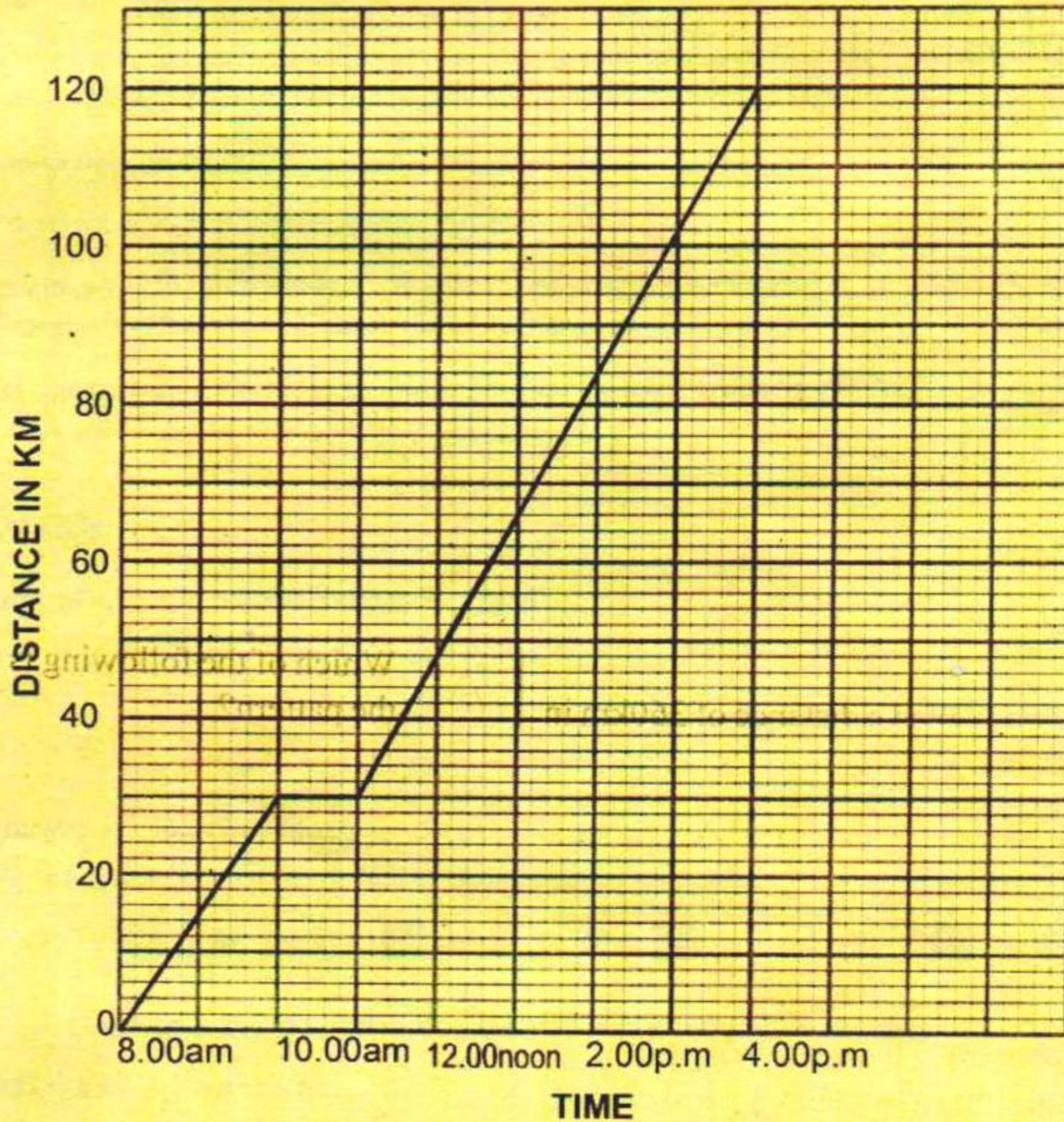Which of the following is the next shape in the pattern?

49. The pie chart below shows how Karani spent his salary.

If the salary was Sh 48 000. How much did he spend on savings?
A. Sh 8 000
B. Sh 12 000
C. Sh 9 600
D. Sh 18 400

50. The graph below shows the journey by Wabati from town **A** to town **B** ?

What was the average speed for the whole journey?
A. 15 km/h
B. 30 km/h
C. 120 km/h
D. 45 km/h