

KCPE PREDICTION STANDARD 8 2023 MATHEMATICS

1. What is thirteen million, three hundred and thirty three thousand three hundred and six and three thousandths written in symbols?
A. 13303306.003
B. 3333303.003
C. 13333306.003
D. 13333306.03
2. What is the total value of digit 8 in the product of 44000 and 2200?
A. Hundred thousands
B. Eight hundred thousand
C. 80000
D. 8000000
3. What is the value of $\sqrt{\left(3\frac{1}{2}\right)^2} \times \left(\frac{2}{3}\right)^2$?
A. $2\frac{1}{3}$
B. 1
C. $5\frac{4}{9}$
D. $1\frac{5}{9}$
4. In a hall there are 72 benches. Each bench can accommodate 8 adults or 12 children. If quarter of the benches are occupied by children and the rest by adults. How many people are seated in this hall?
A. 648
B. 1440
C. 792
D. 576
5. What is the value of $\frac{0.21 \times 0.35 \times 26.7}{0.7 \times 0.03 \times 0.89}$?
A. 1.05
B. 105
C. 1050
D. 0.105
6. In a day when $\frac{1}{3}$ of pupils in a school were absent, 240 pupils were present. How many pupils were present in a day $\frac{1}{4}$ were absent?
A. 180
B. 270
C. 540
D. 90
7. What is the value of $\left(1\frac{1}{8} + 1\frac{1}{4} \div \frac{3}{2}\right) \div \frac{1}{2}$?
A. $4\frac{11}{12}$
B. $3\frac{1}{6}$
C. $3\frac{11}{12}$
D. $2\frac{19}{24}$
8. What is the value of $\frac{10 - 5 \text{ of } (108 \div 9) \div 4 + 8}{2}$?
A. $11\frac{1}{2}$
B. $2\frac{1}{2}$
C. $7\frac{1}{2}$
D. $1\frac{1}{2}$

9. Which is the correct order of writing the fractions $\frac{7}{16}$, $\frac{5}{8}$, $\frac{3}{4}$ and $\frac{4}{9}$ in ascending order?

A. $\frac{3}{4}$, $\frac{5}{8}$, $\frac{7}{16}$, $\frac{4}{9}$

B. $\frac{3}{4}$, $\frac{5}{8}$, $\frac{4}{9}$, $\frac{7}{16}$

C. $\frac{7}{16}$, $\frac{4}{9}$, $\frac{5}{8}$, $\frac{3}{4}$

D. $\frac{4}{9}$, $\frac{7}{16}$, $\frac{5}{8}$, $\frac{3}{4}$

10. What is the sum of the next two numbers in the pattern?

2, 5, 8, 14, 23, _____

A. 60

B. 100

C. 98

D. 96

11. What is $2\frac{1}{2}\%$ expressed as ratio in its simplest form?

A. 1:40

B. 5:200

C. 40:1

D. 200:5

12. What is the fewest number of mangoes that can be shared equally among pupils in different groups of 12, 18 and 24 without a remainder?

A. 36

B. 6

C. 96

D. 72

13. The price of an item was sh. 4000. It was increased by 10% in the month of December and then decreased by 10% in the month of January. What is its price in the month of January?

A. sh. 4000

B. sh. 4400

C. sh. 3960

D. sh. 3600

14. Twelve men working at the same rate were hired to complete a piece of work in 36 days. If 4 men failed to report, how many more days did the remaining men take to complete the work?

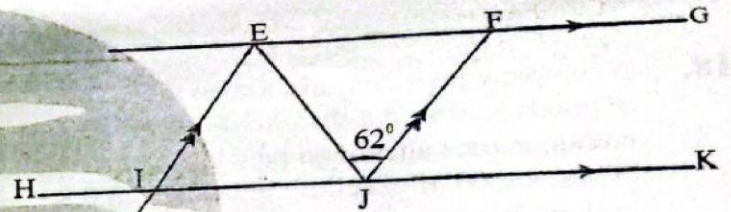
A. 48 days

B. 54 days

C. 18 days

D. 36 days

15. In the figure below EFJI is a rhombus. Line EJ is a diagonal and angle EIJ = 62° .



What is the size of angle EIJ?

A. 124°

B. 56°

C. 28°

D. 66°

16. Eight packets each full of 75dl of milk were emptied and filled in a rectangular container with a square base. Each side of the base is 50cm. What was the height of the rectangular container?

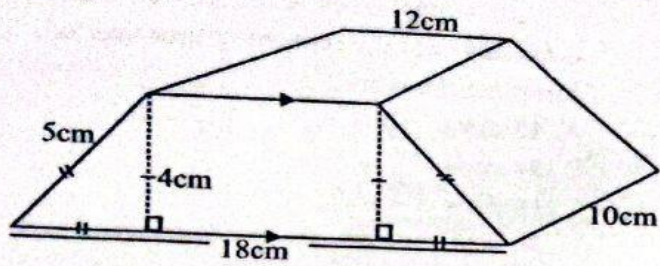
A. 20cm

B. 12cm

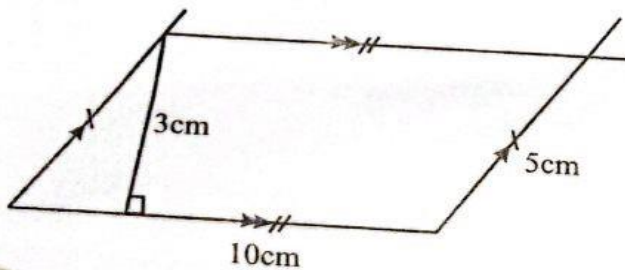
C. 24cm

D. 16cm

17. The figure below represent a solid. What is the area of its cross section?



- A. 120cm^2
 B. 90cm^2
 C. 72cm^2
 D. 60cm^2
18. A company pays commission on the value of goods sold above shs. 80000. In one month, a sales agent was paid a commission of shs. 48000 after selling goods worth 0.8 million. What was his percentage commission?
- A. 6%
 B. $6\frac{2}{3}\%$
 C. 10%
 D. $5\frac{5}{11}\%$
19. The scale used on a map is 1:20000. What is the actual area in hectares of a piece of land represented below?

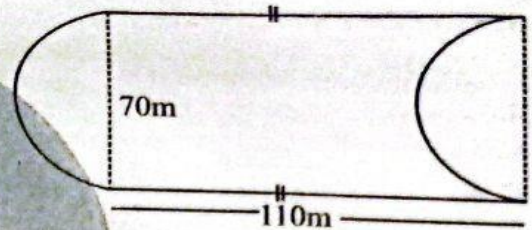


- A. 120ha
 B. 12ha
 C. 200ha
 D. 60ha

KCPE PREDICTION 1

20. Ali borrowed shs. 40,000 from a bank that charged a compound interest at a rate of 10% p.a. How much money did he pay back after 2 years?
- A. shs. 48400
 B. shs. 48000
 C. shs. 8400
 D. shs. 8000

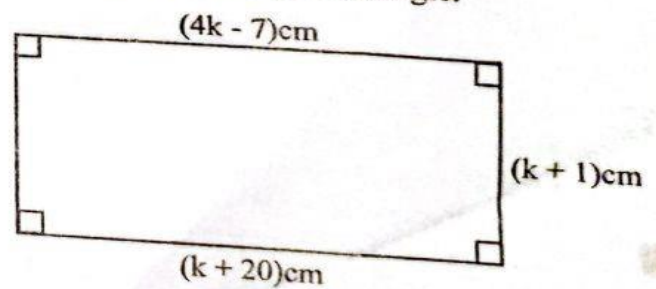
21. The figure below represents a plot of land bounded by two straight edges and two semicircles. Three strands of wire were used to fence the plot.



What was the total length of the wire used?

- A. 440m
 B. 990m
 C. 1320m
 D. 2210m
22. A watch loses 5 seconds every hour. It was set correct on Tuesday at 10.30a.m. What time was it showing on Tuesday the following week at 10.30p.m.
- A. 10.16a.m.
 B. 10.16p.m.
 C. 10.15a.m.
 D. 10.15p.m.

23. The figure below is a rectangle.



What is the perimeter of the rectangle?

- A. 290cm
 B. $(6k + 14)\text{cm}$
 C. 78cm
 D. 68cm

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24. In a crusade there were 240 people. The ratio of female to males was 5:3 respectively. Later 30 males joined and 15 female left. What was the new ratio of male to female in the crusade?
 A. 9:8
 B. 8:9
 C. 4:11
 D. 12:5

25. The mean of six numbers is $4\frac{2}{3}$ five of these numbers are 3, 7, 5, 3 and 8. What is the difference between the median and the mode of the six numbers?
 A. 1
 B. 4
 C. 3
 D. 7

26. The table below shows fare between different towns in shillings for adults. Children pay half the fare.

Njiwa				
50	Tausi			
100	80	Kasuku		
120	100	90	Tai	
150	140	120	100	Chiriku

Four teachers and twenty pupils travelled from Njiwa to Chiriku town via Kasuku town. How much money did they pay for the whole journey?

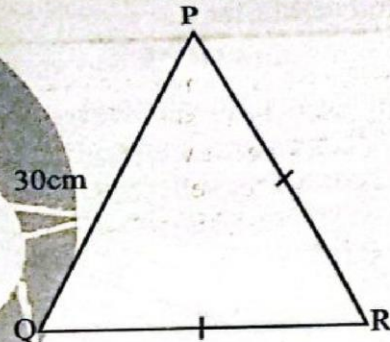
- A. shs. 3600
 B. shs. 1680
 C. shs. 2100
 D. shs. 3080
27. The cash price of a sofa set is shs. 16000. Muli bought it on hire purchase term. The total amount he paid was 25% more than the cash price. He paid a deposit of shs. 2000 and the rest in 12 equal monthly instalments. How much was each instalment?
 A. shs. 18000
 B. shs. 1500
 C. shs. 1600
 D. shs. 3000

28. What is the value of y in the equation below?

$$\frac{1}{2} + \frac{2(y-2)}{2} = 8$$

- A. 6
 B. 10
 C. $9\frac{1}{2}$
 D. $6\frac{1}{2}$

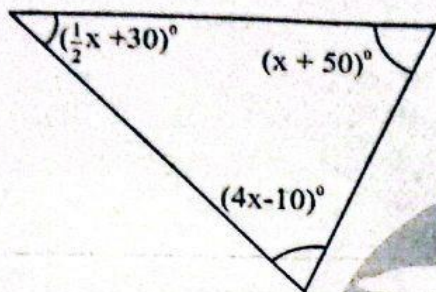
29. The figure below is an isosceles triangle PQR. RQ = RP. The perimeter of the triangle is 64cm. PQ = 30cm.



What is the area of the triangle?

- A. 120cm^2
 B. 510cm^2
 C. 255cm^2
 D. 60cm^2
30. Electric poles are fixed at equal intervals of 50 metres apart. A total of 101 poles were used along one side of the road. What is the total distance between the first and the last pole?
 A. 5.05km
 B. 10.1km
 C. 5km
 D. 10km
31. A cylindrical, closed concrete tank has a diameter of 14m and a height of 2m. The tank was painted outside using white paint. What area was painted?
 A. 396m^2
 B. 88m^2
 C. 308m^2
 D. 242m^2

three angles



What is the name of the triangle?

- A. Isosceles triangle
- B. Scalene triangle
- C. Right angled triangle
- D. Equilateral triangle

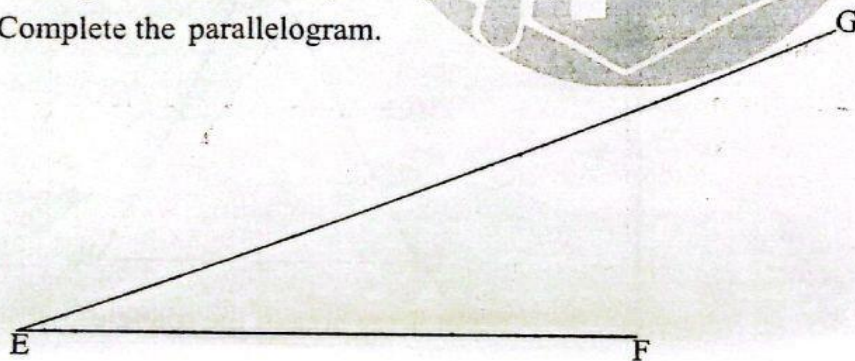
33. A pupil had a cardboard which was 30cm long and 20cm wide. The pupil then cut a quarter circle of radius 7cm from each corner of the cardboard. What is the perimeter of the remaining cardboard?

- A. 44cm
- B. 88cm
- C. 144cm
- D. 56cm

34. A trader would have made a profit of 20% had she sold an item at shs. 3600. For how much did she sell it if she made a profit of 5%?

- A. shs. 3000
- B. shs. 2850
- C. shs. 450
- D. shs. 3150

35. The figure below shows part of parallelogram EFGH. Line EG is diagonal of the parallelogram. Complete the parallelogram.



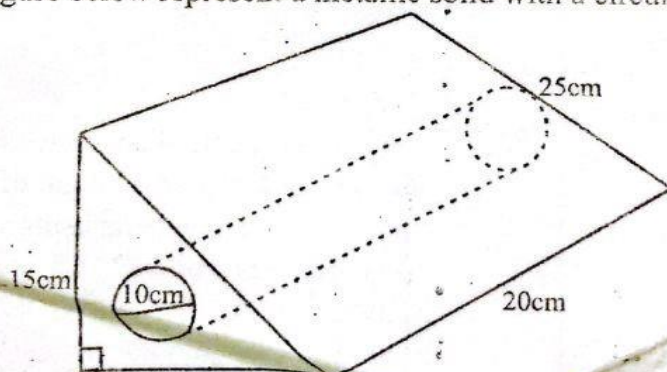
What is the length of the shorter diagonal of the parallelogram?

- A. 7cm
- B. 5cm
- C. 19cm
- D. 11.5cm

36. Which of the following expressions is the simplified form of $\frac{3(2p+2r)+3p}{4(5r+2p)-2r-2p}$

- A. $\frac{9p+6r}{18r+6p}$
- B. $\frac{p+r}{2r+p}$
- C. $\frac{3p+2r}{6r+2p}$
- D. $\frac{2p+r}{3r+p}$

37. The figure below represent a metallic solid with a circular hole drilled through.

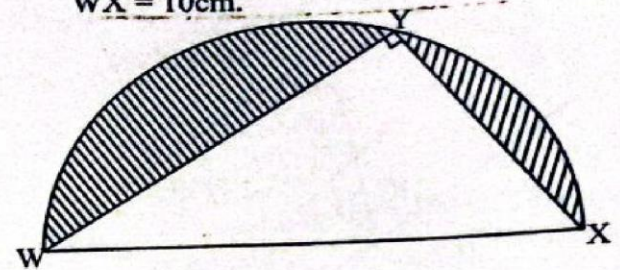


What is the volume of the remaining solid?

- A. 3000cm^3
- B. 1570cm^3
- C. 1430cm^3
- D. 4570cm^3

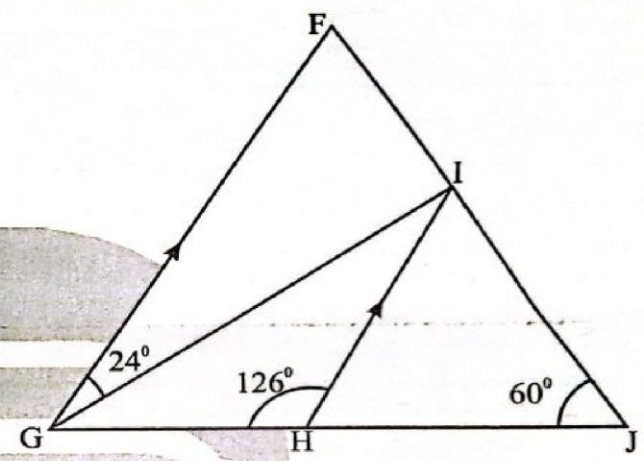
38. Awinja bought a machine for shs. 102,000 after getting a discount of 15%. What was the marked price of the machine?
 A. 15300 B. 117300
 C. 86700 D. 120000
39. Water gained heat at a rate of 8°C per minute for 9 minutes. It was then allowed to cool at a rate of 6°C per minute. If its temperature before heating was 22°C , what was its temperature after 20 minutes?
 A. 28°C B. 72°C
 C. 6°C D. 22°C
40. In a farm there are turkeys, chickens, ducks and guinea fowls. The number of turkeys is represented by P. The number of chicken is four times that of turkeys but 12 less than that of guinea fowls. The number of ducks is 6 more than that of turkeys. If the total number of poultry in the farm is 348 which equation represent this information?
 A. $10p - 18 = 348$ B. $10p + 18 = 348$
 C. $10p - 6 = 348$ D. $4p + 22 = 348$
41. An empty lorry weighs 4.8 tonnes. It was loaded with bags of wheat each 80kg. If the total mass of the loaded lorry was 12 tonnes, how many bags of wheat were loaded?
 A. 210 B. 60
 C. 90 D. 150
42. Jebii bought the following items from a shop.
1 $\frac{1}{2}$ kg of beans @ shs. 120
Three-2kg packets of wheat flour @ shs. 240
Two packets of tea leaves for shs. 90
Four- $\frac{1}{4}$ litre packets of milk at shs. 40 per packet
Three loaves of bread @ shs. 65
 She paid for the items using two-one thousand shilling notes. How much balance did she get?
 A. shs. 1375 B. shs. 1465
 C. shs. 535 D. shs. 625

43. In the diagram below WX is diameter of the semicircle. WY = 8cm, XY = 6cm and WX = 10cm.



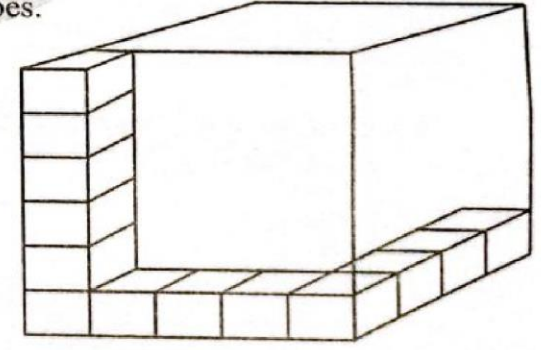
- What is the area of the shaded part? ($\delta = 3.14$)
 A. 39.25cm^2 B. 15.25cm^2
 C. 24cm^2 D. 63.25cm^2

44. In the figure below GF is parallel to HI. Angle GHI = 126° , angle FGI = 24° and HJI = 60° .

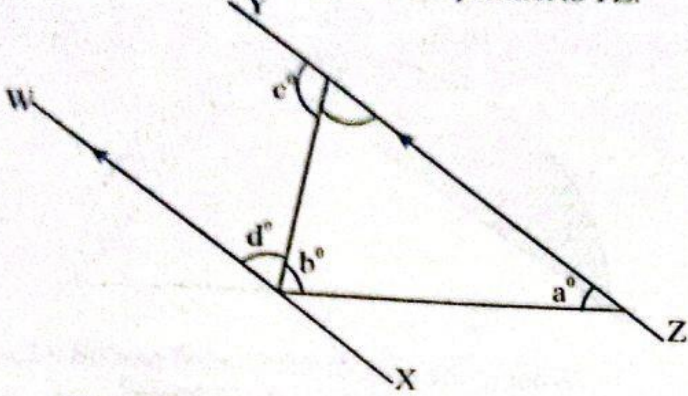


- What is the size of angle FIG?
 A. 66° B. 54°
 C. 90° D. 30°

45. The figure below shows a box with some cubes.



- How many more cubes are needed to fill the box?
 A. 107 B. 13
 C. 87 D. 133



- Which statement is true about the figure?
- A. $b + d + c = 180^\circ$ B. $a + c + d = 180^\circ$
 C. $a + b + d = 180^\circ$ D. $a + b = c + d$

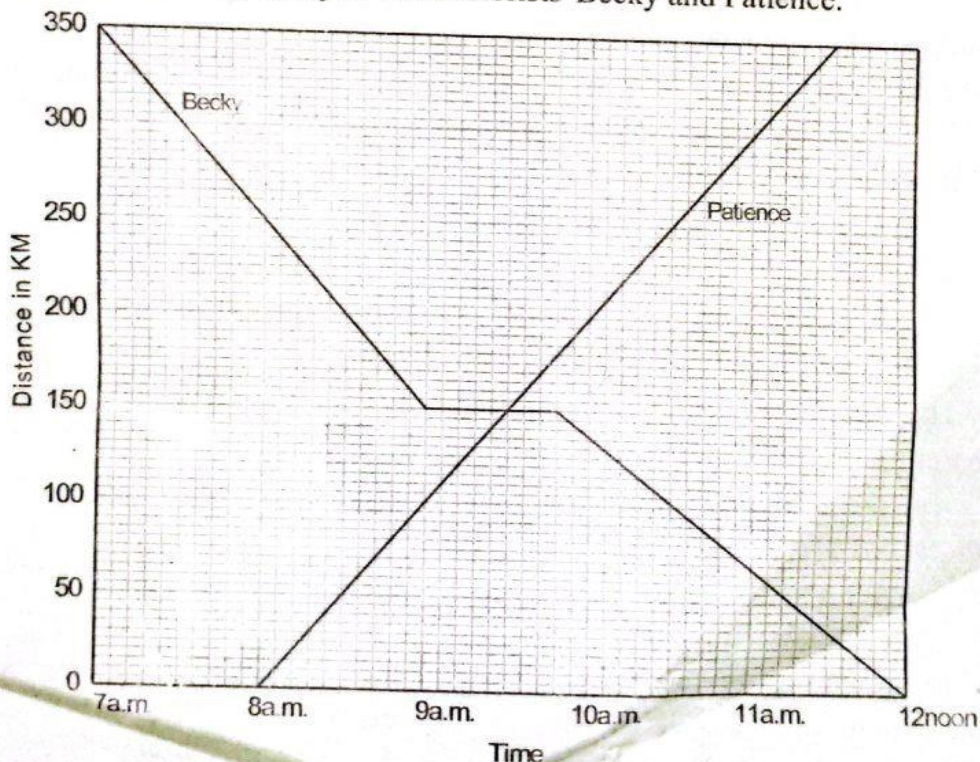
47. The table below shows how Kigen utilizes his piece of land.

Activity	Wheat	Homestead	Maize	Grazing
Size (ha)	$3x$	$\frac{1}{6}x$	$2x$	$6\frac{5}{6}x$

If his total land is 72 hectares, how many degrees on a pie chart will represent grazing?

- A. 90° B. 205°
 C. 30° D. 225°

50. The graph below shows the journey of two motorists Becky and Patience.

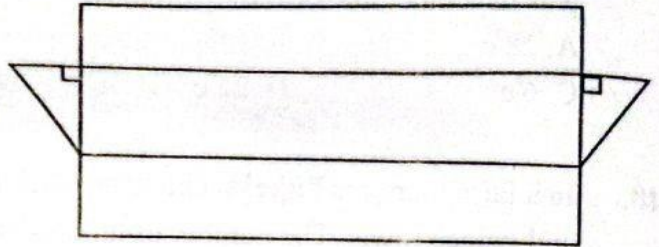


What was the difference between their average speed?

- A. 30km/hr B. 70km/hr C. 100km/hr D. 170km/hr

46. Which of the following properties are true about all triangles?
- A. Interior angles add up to 360° .
 B. One angle is 90° .
 C. Exterior angles add up to 180° .
 D. Two opposite interior angles add up to one exterior angle.

49. The figure below shows a net of a solid.



What is the name of the solid formed if the net is folded?

- A. Triangular based pyramid
 B. Rectangular prism
 C. Triangular prism
 D. Rectangular pyramid