

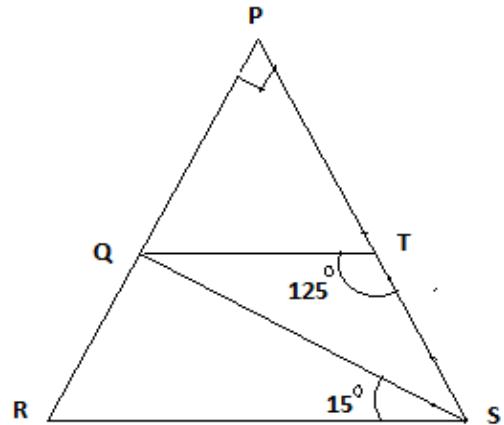
BASELINE EXAM
MATHEMATICS

FULL NAME _____ SCHOOL _____

Answer the questions to the best of your ability. Remember, there is only ONE correct answer.

1. Which one of the following is sixteen million, nine hundred two thousand twenty and seven hundredths?
A. 16902020.07
B. 1692020.7
C. 16900220.007
D. 16090220.70
2. What is the total value of digit 7 obtained after working out 0.2016 divided by 28 ?
A. 0.0072
B. 0.007
C. 0.70
D. 7
3. What is 6.0966 corrected to 2 decimal places?
A. 6.09
B. 6.009
C. 6.10
D. 6.100
4. What is 0.3 of $2.4 + 3.6 - 1.2 \div 0.4$?
A. 7.8
B. 6.72
C. 1.5
D. 1.32
5. The length of the road to the chief's office is 0.528 km from the main road. Trees were planted on both sides of the road 8 m apart. What is the maximum number of trees that were planted?
A. 134
B. 66
C. 132
D. 67
6. $\frac{1}{4}$ of $20 - 4 \times \frac{1}{8} \div \frac{1}{2}$ equals to?
A. $4\frac{3}{4}$
B. $\frac{1}{4}$
C. 1
D. 4
7. What is the next number in this sequence: $0.05, 0.2, 0.35, 0.5, 0.65, \underline{\quad}$?
A. 0.75
B. 0.25
C. 0.8
D. 0.7

8. A triangular prism has an equilateral triangle of side 4cm and a height of 3.5cm . If the length of the prism is 15cm . What is the volume of the prism in cm^3 ?
A. 210
B. 105
C. 2100
D. 1050
9. In the diagram below QT is parallel to RS , PQR and PTS are straight lines, Angle $QTS = 125^\circ$ and Angle $QSR = 15^\circ$.



What then is the size of Angle RQS ?

- A. 115°
 - B. 90°
 - C. 130°
 - D. 105°
10. 45 pupils of class eight had an average mass of 56.9 kg . When the mass of their class teacher was included the average rose to 57.3 kg . What was the teacher's mass?
A. 75.3 kg
B. 57.3 kg
C. 65.3 kg
D. 70.5 kg

11. The table below shows how pupils scored on a science test:

Scores	80	70	60	40	30	12
Frequency	1	2	3	5	2	1

What was the **sum** of the mean score and the mode?

- A. 100
 B. 53
 C. 48
 D. 88
12. The charges for sending a telegram are Shs 35 for the first ten words or less, Shs 1.40 for any extra word and a 20% tax of the total charged. How much did Jirrom pay for the telegram below, rounded off to the nearest shillings?

**GIRADO OWITI BOX 200 MBITA
 FATHER ADMITTED ICIPE HOSPITAL
 SEND SHS 1000 HOSPITAL BILL JIROM**

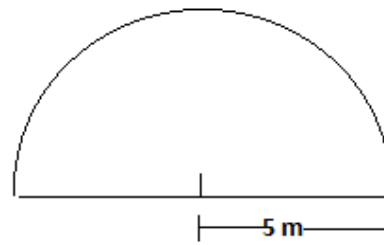
- A. 42.00
 B. 50.40
 C. 50.00
 D. 8.40
13. The area of a rectangle is 168 cm^2 . What is the length of its diagonal if one of its sides is 7 cm?
- A. 17 cm
 B. 25 cm
 C. 13 cm
 D. 24 cm
14. What is the value of x in the equation:
 $98 + 23x + 10 = 223$
- A. 5
 B. 10
 C. 43.4
 D. 220
15. Simplify: $3(a + b) - 2(a + b)$
- A. $a + 5b$
 B. $a + b$
 C. $3a + 3b$
 D. $3a - 3b$
16. A train left Nairobi on Sunday at 11:30 AM. It took 15 hours to reach Malaba. When did it reach Malaba?
- A. Monday 0230 h
 B. Tuesday 1430 h
 C. Wednesday 1430 h
 D. Monday 1430 h

17. If 6 men would take 32 days to finish some work, how many more men must be employed to finish the work in 12 days?
- A. 10
 B. 16
 C. 6
 D. 12

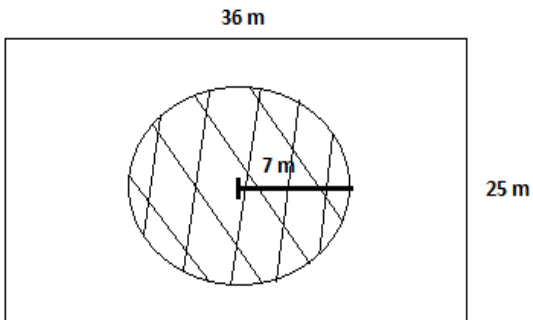
18. A clock gains thirty seconds every hour. The clock was set right at midnight on Saturday. What time will the clock show the following Thursday, when the correct time will be midnight?
- A. 11:00 PM
 B. 12:30 AM
 C. 1:00 PM
 D. 1:00 AM

19. In the year 2006, people who visited Banda VCT Centre were 500. In the year 2007 the number increased in the ratio of 13:10. How many people visited the centre in the year 2007?
- A. 550
 B. 650
 C. 600
 D. 750

20. What is three times the perimeter of this figure BELOW: take $\pi = 3.14$
- A. 15.7 m
 B. 25.7 m
 C. 77.1 m
 D. 88.1 m



21. Nyandago uses $\frac{3}{10}$ of his land for growing cassava. He uses $\frac{2}{7}$ of the remainder for maize and beans and the rest for cattle grazing. If the area of the land used for grazing was 10 ha, what is the total area of Nyandago's farmed land?
- A. 10 ha
 B. 20 ha
 C. 16 ha
 D. 25 ha
22. Find the area of the unshaded region in this figure rounded to the nearest meter.



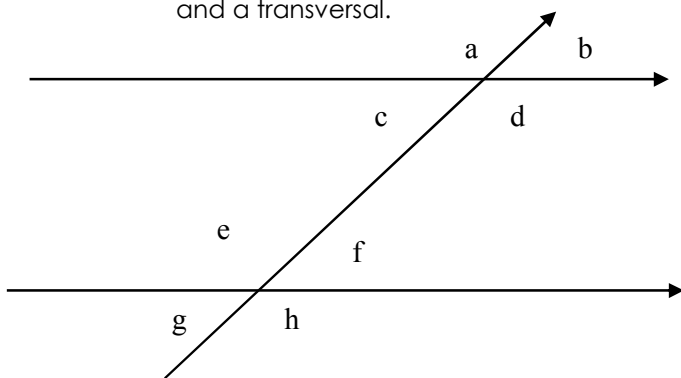
- A. 154 m²
- B. 254 m²
- C. 900 m²
- D. 746 m²

23. An athlete took 8 seconds to run a 100 m race. What was his speed in km/hr?
- A. 12.5 km/hr
 - B. 80 km/hr
 - C. 360 km/hr
 - D. 45 km/hr
24. Fatuma bought the following items:
- A. 2 ½ kg of sugar at Shs 84/kg
 - B. 2 bars of soap at Shs 73 each.
 - C. 2 kg packet of maize flour for Shs 120
 - D. 2 kg tin cooking fat for Shs 355

If she paid using one thousand shilling note, how much balance did she get?

- A. 831 Shs
- B. 169 Shs
- C. 721 Shs
- D. 279 Shs

25. The figure below shows two parallel lines and a transversal.



Which of the following statements is **true**?

- A. $a + b = f + e$
- B. $f + g = 180^\circ$
- C. $b + c = h + g$
- D. $h + e + a + b = 180^\circ$

26. The area of a curved surface of a hollow cylinder is 628 cm² and its radius is 5 cm. What is the length of the cylinder?

Take $\pi = 3.14$

- A. 20 cm
- B. 200 cm
- C. 15 cm
- D. 80 cm

27. Jommo deposited Shs 50,000 in a bank that paid simple interest at the rate of 6.25% p. a. How much money was in his account after 1 ½ years?

- A. Shs 54,687.50
- B. Shs 3,125
- C. Shs 53,125
- D. Shs 4,687.50

28. A tank is 35% full of water. After adding 1050 litres of water it becomes 45% full. What is its capacity in litres when it is full?

- A. 10,500
- B. 525
- C. 5,250
- D. 1,416

29. Simplify:

$$\frac{2.1 \times 3.5 \times 2.67}{0.49 \times 1.5 \times 0.89}$$

- A. 0.3
- B. 3
- C. 30
- D. 300

30. One hundred half-litre packet of milk were repacked into 2-decilitre packets. How many 2-decilitre packets were used?

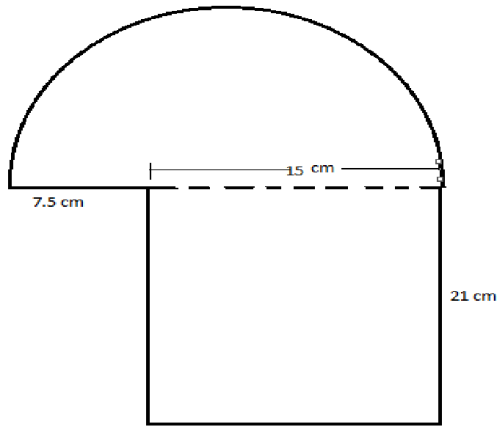
- A. 200
- B. 150
- C. 250
- D. 500

31. The diagonals of a rhombus are 8 cm and 6 cm respectively. What is the area of the rhombus in cm²?

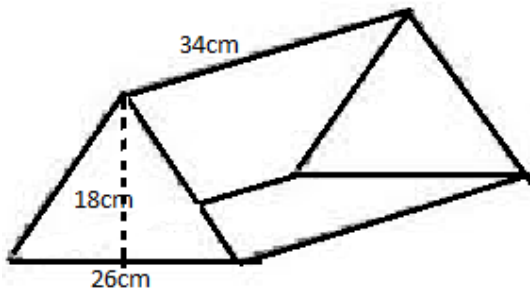
- A. 6 cm²
- B. 12 cm²
- C. 24 cm²
- D. 25 cm²

32. A sum of money is shared between Omiembe and Muganda in the ratio of 3:7. If Muganda got Shs 12 more than Omiembe, how much did Omiembe get?

- A. Shs 9
- B. Shs 18
- C. Shs 21
- D. Shs 30



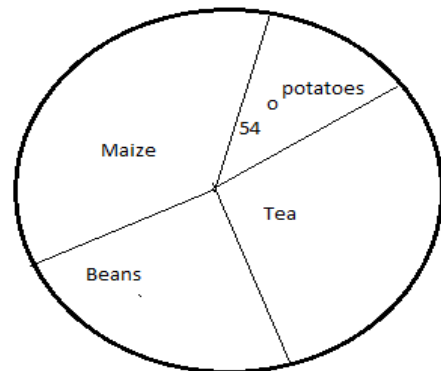
33. Find the perimeter of the figure above.
- 78.825cm
 - 97.05cm
 - 99.825cm
 - 88.05 cm
34. Kasala bought 3 shirts and 2 trousers. The cost of a shirt was half that of a trouser. He paid a total of Shs 455. What was the cost of a trouser?
- 130 Shs
 - 165 Shs
 - 195 Shs
 - 260 Shs
35. A section of a road measuring 2500 m is represented by a line 5 cm on a map. What was the scale used?
- 1: 500
 - 1: 5000
 - 1: 50 000
 - 1: 500 000



36. Find the volume of the wedge shown above.
- 7956 cm³
 - 15912cm³
 - 3978 cm³
 - 117 cm³
37. Konjeso, a salesgirl, earns a basic salary of Shs 4000 per month. She is also paid a

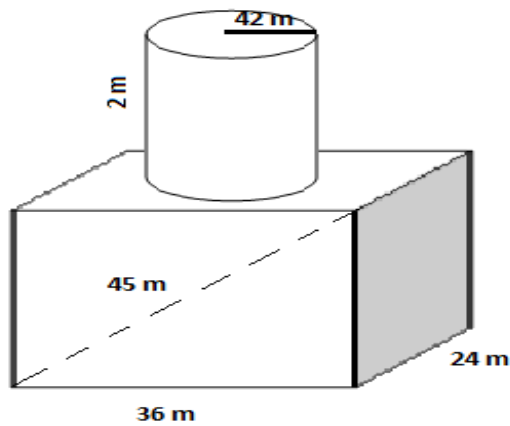
commission of 5% of the value of goods sold above Shs 20 000. In one month she sold goods worth Shs 78 5000. How much did she earn that month?

- Shs 6925
 - Shs 7725
 - Shs 8925
 - Shs 7925
38. The pie chart below shows how Omollo utilised his 384 hectares of land. If potatoes took half as much as beans, and tea and maize have equal portions, what angle represents beans?



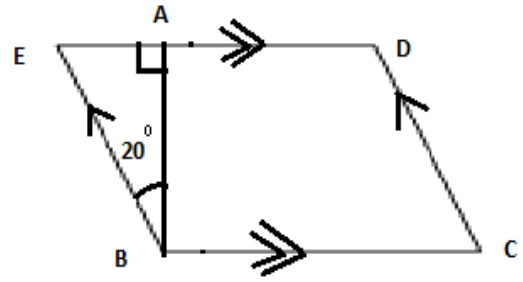
- 115.2 degrees
 - 115.4 degrees
 - 108 degrees
 - 54 degrees
39. Draw a circle which passes through points A, B and C of a right angled triangle ABC on which AB= 9 cm. BC= 12 cm and CA= 15 cm
- What is the radius of the circle?
- 10cm
 - 7.5cm
 - 3cm
 - 5cm
40. Okello bought a television set on hire purchase by paying a deposit of Shs 4320 plus 10 monthly installments of Shs 1368 each. What percentage of the total cost was the deposit?
- 48%
 - 45%
 - 22%
 - 24%

41. The solid BELOW represents a block of metal. Calculate the volume of the block.



- A. 11088 m^3
 B. 34416 m^3
 C. 38880 m^3
 D. 49968 m^3
42. In a tailoring shop the price of 5cm trousers is reduced by 20% to Shs 2480 in a reduction sale. What was the original price?
 A. Shs 2976
 B. Shs 328
 C. Shs 3100
 D. Shs 3620
43. The floor of a square sitting room is covered completely by four equal square carpets. The area of each carpet is 3136 m^2 . What is the length of one side of the room?
 A. 56 m
 B. 224 m
 C. 112 m
 D. 784 m
44. Osieko deposited Shs 6000 at Equity Bank and collected it after 2 years. If the compound interest on the money was 10% p.a., how much did he receive?
 A. 6600
 B. 7260
 C. 1260
 D. 7800

45. The figure below is a quadrilateral.



What is the value of the angle ADC in degrees?

- A. 100°
 B. 20°
 C. 70°
 D. 110°
46. What is the value of $3x-y+r$ given that $x = 6$, $y = r - 4$, and $r = x + 2$?
 A. 106
 B. 110
 C. 96
 D. 114
47. In a wedding party each person contributed thrice as many shillings as there were persons. If the total amount of money contributed was Shs 9408. How many people attended the wedding?
 A. 28
 B. 49
 C. 56
 D. 63
48. One Monday 4 of girls in a class in Lisori primary school were absent. A total of 30 pupils were present that day. If 18 boys were present, how many boys were absent that day if the class has 36 pupils?
 A. 8
 B. 6
 C. 2
 D. 10

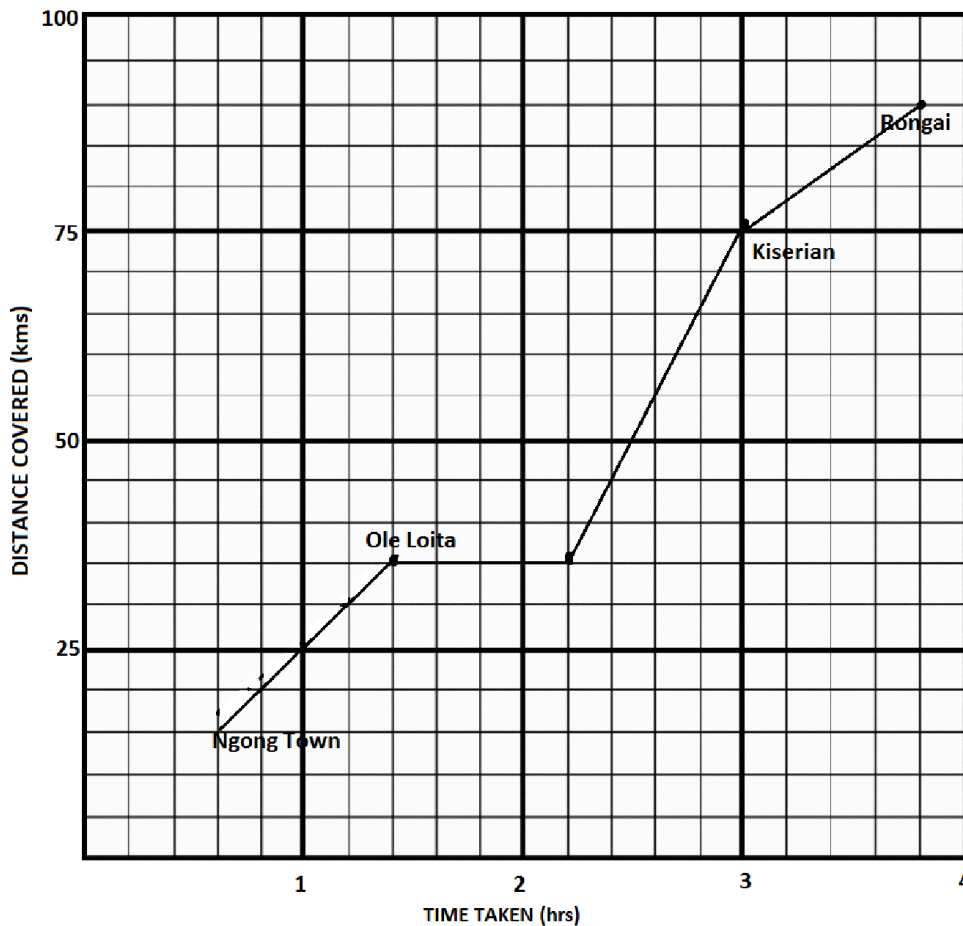
49. The table below shows postal rates for sending a money order. Use it to answer question

Value of Order in Shs	Ordinary Monday Order Commission	Express Money Order Commission
Up to 500	42	77
501 – 1000	114	146
1001 – 3000	174	203
3001 – 5000	209	237
5001 – 10 000	295	319
10 001 – 20 000	441	503
20 001 – 30 000	617	656
30 001 – 35 000	657	682

Nkirote sent two money orders: One ordinary money order for Shs 17 500 and the other for Shs 10 000 by express money order. How much money did she pay at the post office altogether?

- A. Shs 760 B. Shs 736 C. Shs 28 236 D. Shs 28 260

50. The graph below shows a journey by a cyclist from Ngong Town to Rongai in Kajiado County.



What was his average speed from Ole Loita to Rongai? (Give your answer as a mixed fraction)

- A. $22 \frac{2}{13}$ km/hr B. $22\frac{5}{13}$ km/hr C. 275 km/hr D. 21.15 km/hr