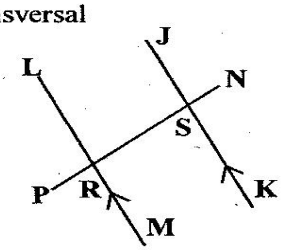
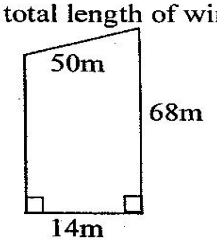
MATHEMATICS

1. Which one of the following numbers is twenty one million, thirty thousand, two hundred and sixty five?
   A. 21032065 B. 21030265
   C. 2130265 D. 2103265
2. How many times is the total value of digit 6 more than the total value of digit 2 in the number 607205?
   A. 3 B. 1000
   C. 3000 D. 599 800
3. A factory produced 98.5 tonnes of sugar. The sugar was packed into 50kg bags. How many bags were obtained
   A. 197 000 B. 19700
   C. 1970 D. 197
4. Which one of the following statement is correct
   A $1\frac{1}{4} > 100\,\%$ **B** $\frac{9}{15} < 60\,\%$
   C $\frac{3}{7} < 37\frac{1}{2}\,\%$ **D** $\frac{5}{6} > 85\,\%$
5. On the diagram below, JK is parallel to LM and NP is the transversal

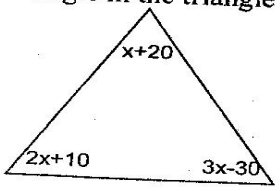


   Which one of the following pairs of angles add up to two right angles?
   A. PRM and RSK B. NSK and LRP
   C. LRS and JSN D. JSN and SRM
6. Which of the following properties is not true for both a square and a rhombus
   A. Diagonals bisect at right angles
   B. All sides are equal
   C. Diagonals bisect the angles
   D. All angles are equal
7. What is the value of
   $\frac{h2k - JK}{m - 3}$ given that h = 3, K = J, M = 5, and J = 4
   A. 12 B. 4
   C. 6 D. 5
8. A rectangular container measuring 90cm long 60cm wide and 40cm high was ¼ full of water. It then rained and there was an increase of 36 000cm³ of water in the container. What is the volume of the empty space in the container?
   A. 216 000cm³ B. 162 000cm³
   C. 126,000cm³ D. 90 000cm³
9. What is the difference in value between the LCM and the GCD of the numbers 12, 36, and 54?
   A. 6 B. 108
   C. 114 D. 155
10. The figure below represents Otieno's plot of land. If he fenced using five strands of wire, calculate the total length of wire used.



    A. 900m B. 760m
    C. 152m D. 660m
11. What is the place value of digit 6 in 6743210
    A. Millions
    B. Tens of millions
    C. Hundred thousands
    D. six millions
12. David deposited sh 40000 in a bank that charged 8% p.a simple interest. After 2½ years, he withdrew all the money, how much did he withdraw?
    A. sh 48 000 B. sh 8000
    C. sh 52000 D. sh 32 000
13. Telephone poles fixed 50m apart were used to supply two towns with electricity which were 2.5 km apart. How many poles were fixed
    A. 50 B. 102
    C. 51 D. 100
14. A cylinder is 20cm high and its diameter is 28cm, find its volume
    A. 49280cm³ B. 1230cm³
    C. 560cm³ D. 2992cm³
15. Twelve men can dig a piece of land in ten days. How many more men are needed for the work to take eight days?
    A. 6 B. 8
    C. 15 D. 3

16. What is the difference between the largest and the smallest angle in the triangle below.



A. 700
B. 200
C. 300
D. 500

17. Arrange the following fractions from the largest to the smallest in their correct order.

$$\frac{5}{8}, 69\%, 0.8, \frac{7}{9}, \frac{1}{2}$$

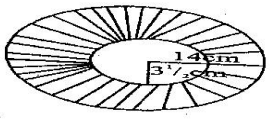
A. $0.8, \frac{7}{9}, 69\%, \frac{5}{8}, \frac{1}{2}$

B. $0.8, 69\%, \frac{7}{9}, \frac{5}{8}, \frac{1}{2}$

C. $\frac{5}{8}, \frac{1}{2}, \frac{7}{9}, 69\%, 0.8$

D. $\frac{1}{2}, \frac{5}{8}, 69\%, \frac{7}{9}, 0.8$

18. What is the area of the shaded part in the figure below?



A. 38.5cm²
B. 577.5cm²
C. 654.5cm²
D. 616 cm²

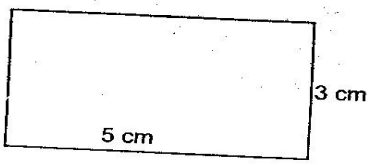
19. What is the value of X in the equation below?

$$\frac{2}{3}x + \frac{2x-4}{4} = 30$$

A. $26\frac{4}{7}$
B. $1\frac{2}{7}$
C. 21
D. 9

20. A square piece of land has an area of 5.76 ha calculate its perimeter in metres.
A. 57600m
B. 9.6m
C. 960 m
D. 480m

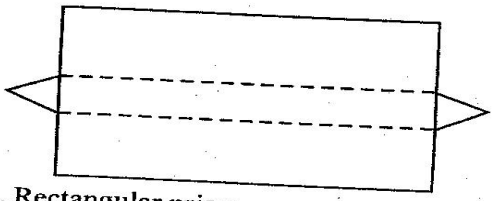
21. The figure below represents a piece of land drawn to scale 1:50000. What is the actual area of the plot in hectares?



A. 37.5ha
B. 3.75ha
C. 375ha
D. 15ha

22. An open cylindrical container has a diameter o 14cm and height 34cm. Find its surface area in cm² $\left(\pi = \frac{22}{7}\right)$
A. 1650cm²
B. 2112cm²
C. 1804cm²
D. 1496cm²

23. The figure below represents the net of a solid. Which solid would be made from the solid below?



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

24. What is the difference of the square root of 0.36 and the square of 0.25?
A. 0.5375
B. 0.11
C 0.6625
D. 1.225

25. Which one of the following is not a multiple of 11?
A. 308924
B. 456111
C. 101013
D. 6567

26. The area of a square mat is

$$\sqrt{3\frac{6}{25}m}^{\,2}$$

What is the length of eash side?

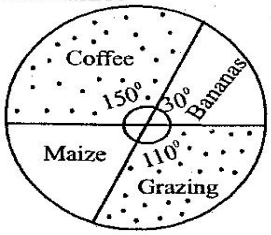
A. $1\frac{4}{5}m$
B. $\frac{5}{8}m$
C. $6\frac{12}{25}m$
D. $7\frac{1}{5}m$

27. Musyoka had 480 litres of milk which he wanted to pack into 2dl packets. How many packet did he require?
A. 400
B. 960
C. 240
D. 2400

28. A cyclist took 10 seconds to cross a bridge 200m. What was his speed in km/h?
A. 20km/h B. 72km/h
C. 20m/s D. 72m/s

29. A butcherman had 13⅓ of meat. He shared it equally among his customers. If each customer got ⅔ of a kg, how many customers were there?
A. 13⅔ B. 14
C. 12 D. 20

30. The pie chart below shows how Lomari used his 36 hectares of land. How many hectares did he use for maize?

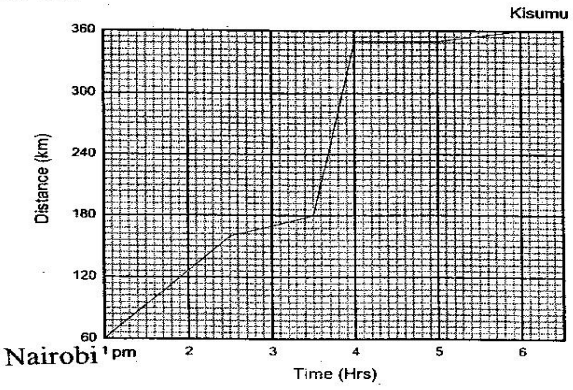


A. 15ha B. 11ha
C. 7 ha D. 70ha

31. What is the G.C.D of 120 and 270?
A. 10 B. 1080
C. 30 D. 3

32. Round off 42.9684 to the nearest hundredths.
A. 43.00
B. 42.97
C. 42.98
D. 42.96

The graph below shows a motorists journey from Nairobi to Kisumu. Use it to answer questions 33-34.



33. How far had he travelled by 4 pm
A. 288km B. 348km
C. 270km D. 260km

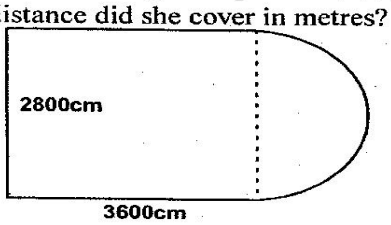
34. What was his average speed for the whole journey?
A. 80km/h B. 72km/h
C. 90km/h D. 60km/h

35. Work out
$$4^2\sqrt{16-2}+95\div 19=$$
A. 16 B. 114
C. 5 D. 21

36. Three bells were ringing at intervals of 20mins, 30mins, and 40 mins, They rang together at 9.20am. When do we expect then to ring together again?
A. 11.50am B. 12.20am
C. 11.20am D. 10.50am

37. The cost of 17 plots of land is sh 850 000. What is the cost of 36 such plots of land?
A. sh 900, 000 B. sh 3600 000
C. sh 30 600 000 D. sh 1 800 000

38. Milka walked along the figure below twice what distance did she cover in metres?



A. 344m B. 288m
C. 172m D. 144m

39. Work out
$$\frac{1}{3}\ of\ 5\frac{1}{4}-5\frac{1}{2}\div 4\frac{2}{5}$$
A $\frac{3}{4}$ B $2\frac{3}{7}$
C $\frac{4}{7}$ D $\frac{2}{5}$

40. The table below shows amount of milk delivered by a farmer to the dairy in 6 days

Days	Mon	Tue	Wed	Thu	Fri	Sat
Milk in litres	20	17	21	15	21	22

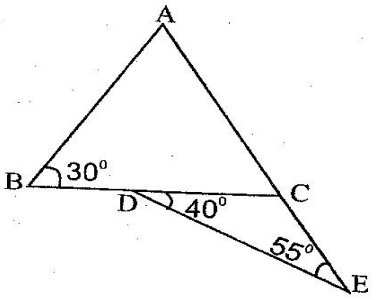
What was the median sale of milk in litres for 6 days?
A. 19⅓ B. 21
C. 20½ D. 18

41. Which one of the following sets of measurement will form a right angled triangle when drawn?
A. 9cm, 16cm, 25cm
B. 10cm, 24cm, 26cm
C. 5cm, 12cm, 17cm
D. 7cm, 2.4cm, 2.5cm

42. What is the value of x in $3(x + 4) - 10 = 32$

A. $11\frac{1}{3}$ B. 10
C. $12\frac{2}{3}$ D. $16\frac{2}{3}$

43. In the diagram below angle ABD measures 30°, angle CDE =40°, angle CED =55°



What is the size of angle BAC?
A. 95° B. 40°
C. 55° D. 85°

44. Using a ruler and a protractor draw triangle XYZ such that line XY = 7cm angle ZXY = 70° and XYZ =42°. What is the measure of angle XYZ?
A. 58° B. 72°
C. 68° D. 52°

45. Find the sum of the LCM of 36, 18 and the GCD of 15, 12 and 9
A. 18 B. 72
C. 39 D. 36

46. The area of a square is 144m². What is the length of one side of the square in metres?
A. 12m B. 42m
C. 24m D. 72m

47. A block of ice was measured and its temperature was -12°C. After heating for 5 minutes, the temperature was at 4°C. What was its rise in temperature?
A. -16°C B. 8°C
C. 16°C D. -18°C

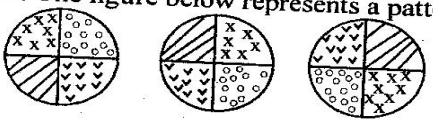
48. Two sisters inherited sh7,200 in the ratio 3:5 such that the elder sister received the bigger share. How much money did she get?
A. sh 6000 B. sh 27000
C. sh 4,500 D. sh 1,200

49. Work out

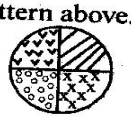
$$\frac{6(24 - 18) + 6 \times 4}{6}$$

A. 30 B. 25
C. 10 D. 28

50. The figure below represents a pattern.



Which one of the following is the next shape in the pattern above.

A 
B 
C 
D