KENYA NATIONAL EXAMINATIONS TEST

STANDARD SEVEN - YEAR 2021

MATHEMATICS

Time: 2 hrs

1. What is the place value of digit 5 in the product of 567 and 28?
   A. Thousands
   B. Hundreds
   C. Five thousand
   D. Hundredths

2. Work out: $\dfrac{0.18 \times 4.28}{1.2 \times 0.8}$
   A. 802.5
   B. 80.25
   C. 0.8025
   D. 0.80625

3. Which of the following is 80500303 written in words?
   A. Eight million five hundred thousands three hundred and three.
   B. Eight million five hundred thousand three hundred and three.
   C. Eight million five hundred three hundred and three.
   D. Eight million five hundred thousands three hundred and three.

4. Round off 6937.3407 to the nearest hundredths.
   A. 6937.340
   B. 6937.34
   C. 6937.30
   D. 7000.00

5. Mwagi ran round the field below three times and covered a distance of 0.81 kilometres. (Take $\pi = \frac{22}{7}$)
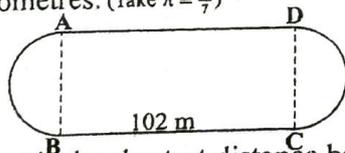
   What is the shortest distance between D and C
   A. 2100m
   B. 33 m
   C. 42m
   D. 21 m

6. The total population of birds in a santuary was 342878. The young birds were 878 more than the adult birds. How many young birds are in the sanctuary?
   A. 171878
   B. 171000
   C. 342000
   D. 343756

7. Work out the value of $\left(\frac{2}{3}\right)^2 + \sqrt{7\frac{1}{9}}$
   A. $2\frac{1}{3}$
   B. $3\frac{1}{3}$
   C. $2\frac{1}{10}$
   D. $3\frac{1}{9}$

8. In the figure below **AB** is parallel to **CD**. Line **QR** is a transvarsal.
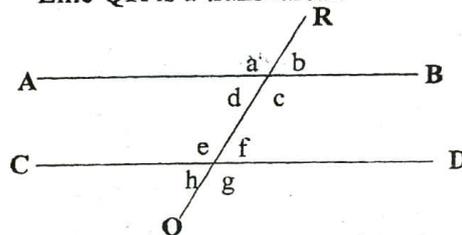
   Which statement is true of the figure above?
   A. $e + g = c + f$
   B. $g + f = d + a$
   C. $h + b = 180°$
   D. $d + a = 90°$

9. Work out $\frac{1}{2}\left(4\frac{1}{2} \div 2\right) + \frac{1}{3}$
   A. $1\frac{11}{24}$
   B. $3\frac{1}{7}$
   C. $4\frac{1}{9}$
   D. $1\frac{17}{24}$

10. Find the value of $\frac{4}{9} + \frac{2}{3}\left(\frac{5}{6} - \frac{1}{4}\right)$?
    A. $2\frac{1}{3}$
    B. $7\frac{5}{6}$
    C. $2\frac{1}{10}$
    D. $\frac{5}{6}$

11. Jeremy bought 3 trays of eggs at a cost of sh 300 each. During transportation 10 eggs broke. He sold the rest at sh 8.00 each. How much profit loss did he make?(Each tray has 30 eggs)
    A. Loss sh 260
   B. Profit sh 260
    C. Loss sh 160
    D. Profit sh 160

12. A family used 4-2 dl packets of milk daily. How many litres will they use in the month of January and February of the year 2018?
    A. 704.92 B. 4720
    C. 472 D. 47.2

13. How many groups of hundreds are there in the total value of digit 5 in the number?
   16548932
    A. 500 B. 5000
    C. 50000 D. 500000

14. Find the volume of a cuboid measuring 15m by 12m by 9m?
    A. 1620 m³ B. 1800 m³
    C. 1920 m³ D. 1500 m³

15. From the figure below, what is the value of angle m?

    A. 160° B. 140°
    C. 120° D. 100°

16. If 40% of a number is 160, what is 75% of the same number?
    A. 400 B. 200
    C. 600 D. 300

17. Hassan bought a sheep for sh 6000. He later sold it making a loss of 15%. What was his selling prince?
    A. sh 5100
    B. sh 5500
    C. sh 4500
    D. sh 900

18. Express $\frac{3}{8}$ as a percentage.
    A. 38% B. 25%
    C. 37.5% D. 8.25%

19. Convert $8\frac{3}{4}$ tonnes into grammes.
    A. 8750
    B. 8750000
    C. 875000
    D. 87500

20. An empty carton weighs 1.6kg. A boy fills the carton with 124 books. If the weight of the load of carton is 17.1 kg. What is the weight of a single book?
    A. 115g B. 95g
    C. 135g D. 125g

21. What is 72 km/h into m/s?
    A. 20 m/s B. 25 m/s
    C. 30 m/s D. 35 m/s

22. Salim left Nairobi for Kericho at 2.15pm. If the journey took 8 hours, at what time did he reach Kericho?
    A. 6.00 pm B. 5.45 pm
    C. 7.15 pm D. 10.15 pm

23. The pie chart below shows how Lucy spends her salary of sh 36000.

    How much did Lucy spend on school fees?
    A. sh 9000 B. sh 13500
    C. sh 4500 D. sh 18000

24. The table below shows postal charges for sending letters.

LETTER	SH	CTS
Not over 30g	21	00
Not over 70g	37	00
Not over 100g	53	00
Not over 250g	82	00
Not over 500g	101	00

    Hemeji posted two letters one weigh 58g and the other one weigh 300g. How much did he pay at the post office?
    A. sh 122 B. sh 154
    C. sh 138 D. sh 145

25. Njoroge deposited sh 50000 in equity bank account which paid a simple interest rate of 4% p.a. How much in total did Njoroje withdraw from his account after 2 years?
    A. sh 4000 B. sh 58800
    C. sh 64000 D. sh 54000

26. Perimeter of a rectangle is 66cm. If one of the side is 15cm, what is the area of the rectangle?

A. 360 cm²
B. 180 cm²
C. 320 cm²
D. 270 cm²

27. What is $\frac{3}{8}$ as a decimal?

   A. 0.125
   B. 0.375
   C. 0.875
   D. 0.38

28. The hire purchase price of an item has a deposit of sh 8500 and equal monthly installments of sh 1200 each. How much money did Otieno pay for the item on hire purchase terms after ten months of instalments?
   A. sh 9700
   B. sh 12000
   C. sh 19500
   D. sh 20500

29. What is the value of $3a + 2bc - \frac{1}{2}a$ if $a = 4$, $b = $ c-a and $c = 5$
   A. 22
   B. 3
   C. 20
   D. 12

30. Calculate the area of the unshaded-region below? (Take $\pi = \frac{22}{7}$)

7cm

7cm
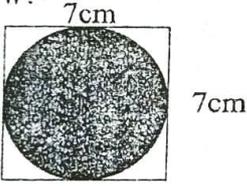
   A. 49 cm²
   B. 38.5 cm²
   C. 10.5 cm²
   D. 105.5 cm²

31. What is the value of $9 \div 0.03 + 1.06 \times 4.2$?

   A. 304.52
   B. 304.4452
   C. 121.06
   D. 3.04452

32. The walls of a room are 6 m long. The width is 4 m and the height is 3 m. What is the total surface area of the walls?
   A. 6 m²
   B. 108 m²
   C. 36 m²
   D. 3 m²

33. Miriam bought a sweater for sh 1620 after being allowed a discount of 10%. What was the marked price of the sweater?–
   A. sh 2220
   B. sh 1820
   C. sh 1800
   D. sh 1782

34. Humphrey bought the following items from a kiosk:
   2½kg of flour @ sh 100
   1¼litres of paraffin for sh 180
   2kg of rice at sh 140 per kg
   ½ litre of cooking oil for sh 80 per litre
   How much did he pay?
   A. sh 795
   B. sh 240
   C. sh 750
   D. sh 800

35. Arrange $\frac{3}{4}$, $\frac{2}{3}$, $\frac{1}{4}$ and $\frac{5}{6}$ from the smallest to the largest.

   A. $\frac{5}{6}, \frac{3}{4}, \frac{2}{3}, \frac{1}{4}$
   B. $\frac{5}{6}, \frac{3}{4}, \frac{1}{4}, \frac{2}{3}$
   C. $\frac{2}{3}, \frac{5}{6}, \frac{1}{4}, \frac{3}{4}$
   D. $\frac{1}{4}, \frac{2}{3}, \frac{3}{4}, \frac{5}{6}$

36. A school bus ferried 680 pupils to an environmental show. If it carried 64 pupils per trip, how many trips did it make ?
   A. 2 trips
   B. 10 trips
   C. 10 trips remainder 40
   D. 11 trips

37. Increase 1200 by 120%
   A. 1440
   B. 2640
   C. 240
   D. 1442

38. The circumference of tractor wheel is 3.6m. The wheel made 1240 revolutions. Calculate the distance it covered in kilometres?
   A. 446.4 km
   B. 44.64 km
   C. 4.464 km
   D. 4464 km

39. The figure below represents a cylindrical model. What is its volume in m².

10.5m

14m
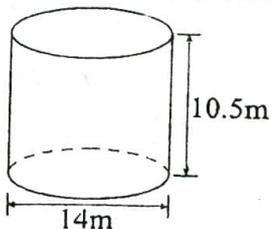
   A. 16170 m³
   B. 1.6170 m³
   C. 161.7 m³
   D. 1617 m³

40. A section of a road 3 km, is represented by a length of 6 cm on a map. What is the scale used?
   A. 1: 300000
   B. 1: 50000
   C. 1: 500000
   D. 1: 5000

41. What is the value of
$5(3x+2y+4) + 3(2x+4y+1)$
in its simplest form?
A. $21x + 22y +23$
B. $21x + 2y +23$
C. $21x - 2y + 23$
D. $21x - 22y +23$

42. What is the next number in the pattern below?
8, 9, 17, 26, 43,
A. 69
B. 61
C. 62
D. 59

43. 24 workers were hired to construct a bridge in 20 days. How many more days did it take to complete the work if only 12 workers turned up?
A. 40
B. 10
C. 20
D. 12

44. What is the number of edges (**E**), faces (**F**) and vertices (**V**) of a closed square prism?

|	E	F	V
A.	12	5	8
B.	9	5	6
C.	12	6	8
D.	8	5	5

45. The area of a square piece of land was 0.242 ha. It was divided into 5 equal square plots. What was the length of each plot in metres?
A. 22 m
B. 24 m
C. 28 m
D. 484 m

46. A salesman is allowed 5% commission on the worth of this total sales he makes. In a certain month, he sold goods worth sh 450000, how much money did he earn that month?
A. sh 22500
B. sh 45000
C. sh 37500
D. sh 17750

47. Find the perimeter of the figure below
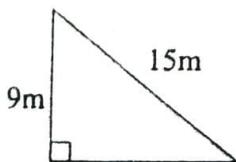
A. 36 m
B. 48 m
C. 56 m
D. 24 m

48. Construct triangle **ABC** such that line **AB** = 5cm, **CAF** = 12cm and angle **CAB** = 90°. Draw a circle that touches the vertices measure the radius.
A. 4.5 cm
B. 3.7 cm
C. 5.5 cm
D. 6.4 cm

49. Below are qualities of a certain quadrilateral
(i) Opposite interior angles are equal
(ii) Opposite sides are equal and parallel to one another.
(iii) Diagonals are varied.

Which quadrilateral is being described above?
A. Square
B. Rectangle
C. Trapezium
D. Parallelogram

50. The graph below shows Dianas journey from town **X** to **Y**.
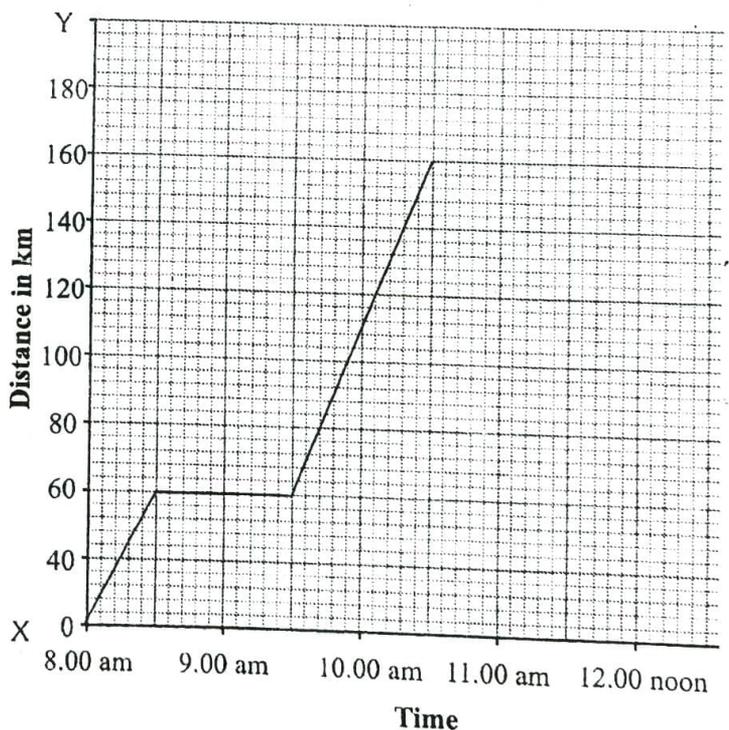
What was her average speed from town **X** to **Y**?
A. 41   km/hr
B. 60 km/hr
C. 53   km/hr
D. 72 km/hr

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