

SCHOOL BASED EVALUATION TEST

D003

STD. 8 YEAR 2022

[8]

MATHEMATICS

Time: 2Hrs.

READ THESE INSTRUCTIONS CAREFULLY.

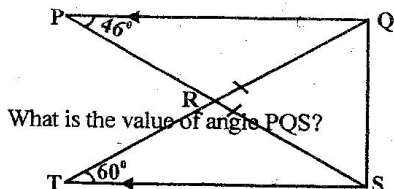
1. You have been given this question paper and a separate answer sheet. The question paper contains 50 questions.
2. Do any necessary rough work in this booklet.
3. Use only an ordinary pencil.

1. YOUR NAME

2. NAME OF YOUR SCHOOL

3. YOUR INDEX NUMBER

1. What is 2242222.22 written in words?
 - A. Twenty two million, four hundred and twenty two thousand and twenty two and twenty two hundredths
 - B. Two million, four hundred and twenty two thousand two hundred and twenty two and twenty two hundredths
 - C. Two million two hundred and forty two thousand two hundred and twenty two and twenty two hundredths
 - D. Two million two hundred and forty two thousand two hundred and twenty two point two two
2. What is the place value of digit 1 in the sum of 284562 and 33642?
 - A. Ten thousands
 - B. Hundred thousands
 - C. Tens
 - D. Hundreds
3. What is the value of $\frac{4}{5} + \frac{3}{5} (\frac{2}{3} - \frac{1}{3}) + \frac{3}{4} \times \frac{2}{5}$?
 - A. $1\frac{43}{150}$
 - B. $1\frac{3}{10}$
 - C. $1\frac{19}{50}$
 - D. $1\frac{23}{250}$
4. What is twice the value of; $0.3 \text{ of } 2.4 + 3.6 - 1.2 \div 0.4$?
 - A. 1.32
 - B. 3
 - C. 15.6
 - D. 2.64
5. Multiply two thousand four hundred and sixty five by two hundred and thirty four. What is the answer rounded off to the nearest ten thousand?
 - A. 576000
 - B. 577000
 - C. 570000
 - D. 580000
6. In the figure below line PQ and TS are parallel lines. TQ and RS are transversal. Angle QPR=46° and angle STR=60°

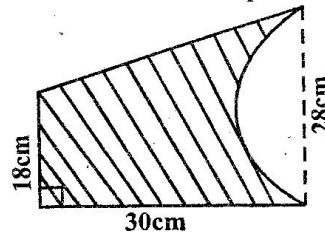


7. What is the sum of the value of the; $\sqrt{2\frac{1}{4}}$ and $(2\frac{1}{2})^2$
 - A. $7\frac{3}{4}$
 - B. $4\frac{3}{4}$
 - C. 4
 - D. $1\frac{1}{2}$
8. Collo bought the following items from a shop;
 - 2kg of sugar @ sh. 120
 - 500g of tea leaves for sh. 150
 - 3 bars of soap @ sh. 90
 - 2kg of cooking fat for sh. 240
 He paid using two-five hundred shilling notes. The shopkeeper decided to give him his balance consisting of only five shilling coins. How many coins did he receive altogether?
 - A. 200
 - B. 180
 - C. 20
 - D. 10
9. Find the area of the floor which is not covered by the carpet which is laid on the floor leaving a 2m margin all round as shown below.

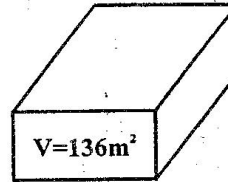
 - A. 868m²
 - B. 930m²
 - C. 1120m²
 - D. 252m²
10. Arrange the following fractions in order from the smallest to the largest. $\frac{3}{5}, \frac{1}{2}, \frac{2}{3}$ and $\frac{5}{8}$
 - A. $\frac{2}{3}, \frac{3}{5}, \frac{5}{8}, \frac{1}{2}$
 - B. $\frac{2}{3}, \frac{5}{8}, \frac{3}{5}, \frac{1}{2}$
 - C. $\frac{1}{2}, \frac{3}{5}, \frac{5}{8}, \frac{2}{3}$
 - D. $\frac{2}{3}, \frac{5}{8}, \frac{1}{2}, \frac{3}{5}$

11. Wambu fenced her square piece of land 30m long. He used four strands of wire leaving a space of 3m for the entrance. What was the total length of the wire used?
 A. 480m B. 468m
 C. 477m D. 117m
12. The price of a radio was reduced by sh 400 which represented a 10% discount. How much would Jane pay for the radio if she had received a 15% discount?
 A. Sh 4000 B. Sh 3600
 C. Sh 600 D. Sh 3400
13. What is the next number in the pattern below?
 8, 21, 38, 57, 80, _____
 A. 109 B. 107 C. 104 D. 99
14. What is the value of $\frac{2d(a^2 - cb^2)}{4d + 3a}$ if $a = 5$, $b = 3$, $c = 1$ and $d = \frac{1}{4}$?
 A. $\frac{1}{8}$ B. $\frac{7}{32}$
 C. $\frac{1}{2}$ D. $\frac{16}{17}$
15. Construct a rhombus PQRS with each side measuring 6cm and angle PQR = 120°. Measure the diagonal QS.
 A. 52cm B. 10.4cm
 C. 6cm D. 3cm
16. The marked price of a car was sh.200000. A 20% discount is allowed when buying it on cash. On hire purchase terms, only 12 monthly installments of sh 40000 each is paid. How much more does it cost to buy the car on hire purchase terms than cash?
 A. Sh 160000 B. Sh 480000
 C. Sh 240000 D. Sh 320000
17. Muinde mops his room after every 3 days, while Mueni mops her room after every 4 days. Tony mops his room after every 6 days. If they all mopped their rooms on 5th May, 2022, on which date did they mop their rooms together again?
 A. 29th May 2022
 B. 17th May 2022
 C. 9th May 2022
 D. 7th May 2022
18. Pupils from Koria primary school contributed 3.5 tonnes of maize flour to help needy people. The maize flour was later repacked into 500g packets. If each needy person got 4 packets of maize flour, how many people got the flour?
 A. 1750 B. 7000
 C. 3500 D. 500 000

19. Find the area of the shaded part in the figure below.

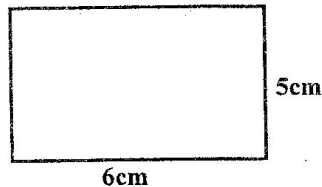


- A. 646cm² B. 382cm²
 C. 840cm² D. 532cm²
20. A salesman earns a salary of sh. 10000 per month plus a commission of 10% on the value of goods sold above sh. 100000. In a certain month, he earned a total of sh. 17000. What was the value of goods he sold that month?
 A. Sh. 700000 B. Sh. 70000
 C. Sh. 117000 D. Sh. 170000
21. The volume of water in the tank below is 136m³.



What is the amount of water in millilitres?

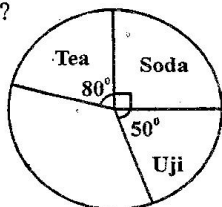
- A. 136000 B. 1360000
 C. 136 000000 D. 13600000
22. Draw a triangle JKL in which line JK = KL = 3cm and angle JKL = 110. Construct a circle passing through points J, K and L. What is the diameter of the circle?
 A. 4.2cm B. 2.6cm
 C. 2.1cm D. 5.4cm
23. The mean of seven numbers is 9. Six of the numbers are 5, 9, 5, 14, 9 and 10. Find the median of the seven numbers.
 A. 9 B. 11 C. 5 D. 9.5
24. The figure below shows a rectangular piece of land drawn to a scale of 1:30000.



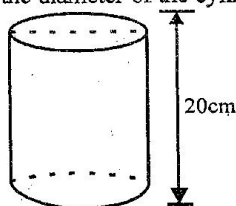
What is the actual size of the land in ares?

- A. 27000 B. 270
 C. 2700 D. 2700 000

25. The pie chart below shows the angles of the sectors representing different types of beverages drunk by pupils in a party. If 70 pupils took orange juice, how many more pupils took soda than those who took uji?



- A. 140 B. 30 C. 45 D. 20
26. The figure below is a cylinder with a height of 20cm. If the area of the curved surface is 880cm², what is the diameter of the cylinder?



- A. 7cm B. 14cm
C. 44cm D. 17600cm
27. What is the possible value of w in the inequality below?
 $13w + 9 > 49 - 7w$
- A. 2 B. 1 C. $1\frac{1}{2}$ D. 12

28. The table below shows the number of people who attended a music show.

Boys	Girls	Men	Women
3240	2211	2175	1213

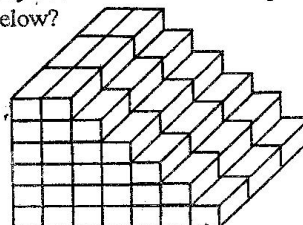
How many more children than men attended the music show?

- A. 1065 B. 3276 C. 36 D. 4238
29. An electric bike takes 20 seconds to cross a 400m bridge. What is the average speed of the bike?
A. 20km/h B. 72m/s
C. 72km/h D. 100m/s
30. Gabu and Abner shared some money in the ratio 5:6 respectively. If Abner got sh. 500 more than Gabu, how much did they share altogether?
A. Sh. 5500 B. Sh. 3000
C. Sh. 2500 D. Sh. 3500
31. Njoroge shared his land to his three children: Simon, Morgan and Kota. Simon got $\frac{1}{4}$ while Morgan got $\frac{1}{5}$ of the land. Kota got $\frac{1}{3}$ of the remainder. If Njoroge remained with 11ha, what was the total size of Njoroge's land?
A. 15ha B. 17ha C. 30ha D. $7\frac{1}{2}$ ha

32. Which of the following sets of measurement will form a right angled triangle?

- A. 18cm; 24cm, 30cm
B. 9cm, 12cm, 18cm
C. 48cm, 5cm, 21cm
D. 16cm, 30cm, 36cm

33. How many cubes are needed to complete the stack drawn below?



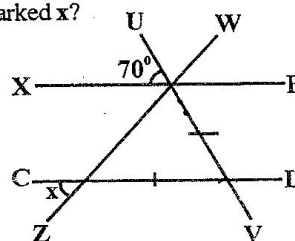
- A. 150 B. 54 C. 114 D. 36

34. Study the bus timetable given below from town R to town W.

Town	Arrival	Departure
R		6.30am
S	9.00am	9.30 am
T	10.45am	11.00am
U	11.45	11.55am
V	12.20pm	1.00pm
W	1.30pm	2.10pm

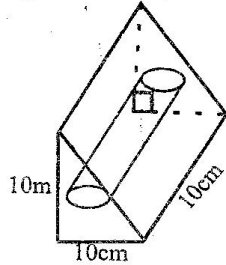
How long did the bus take to travel from town S to town W?

- A. 5 hrs 10 mins B. 4hrs 40mins
C. 4hrs 30mins D. 4hrs
35. Nine people can complete a piece of work in 36 days. If 6 people did not turn up, how many more days would the remaining people take to complete the work?
A. 72 B. 48 C. 108 D. 24
36. In the figure below, AB is parallel to CD. UV and WZ are straight lines. What is the size of the angle marked x ?

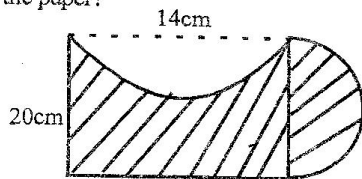


- A. 70° B. 110° C. 60° D. 55°
37. A farmer had 120 animals, of which 50% were cows, 30% goats and the rest sheep. He increased the number of goats by 25%, sheep by 50% and decreased the number of cattle by 20%. How many animals did he finally have?

- A. 186 B. 153 C. 135 D. 129
38. What is the product of the number of edges and vertices of a triangular prism?
A. 96 B. 54 C. 15 D. 45
39. The figure below represents a solid with the shape of a wedge. A cylinder of diameter 1.4cm has been removed from it. What is the volume of the remaining solid in cm^3 ?



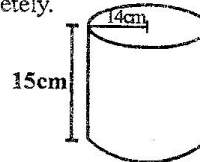
- A. 484.6 B. 500 C. 15.4 D. 48.46
40. Jane is now five years older than Tom. If Tom's age is represented by x , form an expression to represent the sum of their ages in 20 years time.
A. $2x - 45$ B. $2x + 25$
C. $2x + 20$ D. $2x + 45$
41. The figure below represents a rectangular piece of paper. A semi-circle of diameter 14cm has been removed while another semi-circle of diameter 20cm joined on the width. What is the area of the paper?



- A. $234\frac{1}{7}\text{cm}^2$ B. $283\frac{1}{7}\text{cm}^2$
C. $360\frac{1}{7}\text{cm}^2$ D. $437\frac{1}{7}\text{cm}^2$
42. Telephone poles were fixed on both sides of the road at an interval of 40m apart. How many poles were fixed over a distance of 48km?
A. 2402 B. 2400 C. 1202 D. 1200
43. Sholei bought 60 bananas for sh 500. After selling all the bananas, she made a 16% loss. What was the selling price per banana?
A. Sh. 8.34 B. Sh. 84
C. Sh. 7 D. Sh. 420
44. On a certain day, a miller prepared 63kg of uji flour and 286kg of ugali flour. The miller charged sh 17 per kg of uji flour and sh 14 per kg of ugali flour. The mill consumed 30 litres of fuel costing sh 100 per litre. The miller also paid sh 300 as wages and sh 400 as payment for the repairs on

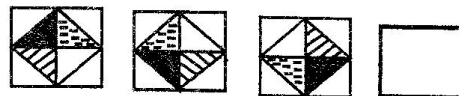
the mill. What was the miller's profit that day?




- A. Sh 5075 B. Sh 1375
C. Sh 3700 D. Sh 3000
45. Alex borrowed sh. 100000 from a bank that charges compound interest at the rate of 12% p.a. If he cleared the loan at the end of the second year, what was the total amount paid to the bank after 2 years?
A. Sh. 25400 B. Sh. 124000
C. Sh. 125440 D. Sh. 24000
46. The cylindrical container below has a label which covered the whole of its curved surface completely.



What is the area of the label in cm^2 ?

- A. 1936 B. 616 C. 9240 D. 1320
47. Below are the prime factors of three numbers
(i) $2^2 \times 3$
(ii) $3^2 \times 2^2$
(iii) $2^2 \times 2^2 \times 3$
Find the sum of the GCD and the LCM of the numbers
A. 12 B. 156 C. 132 D. 144
48. A wheel has a radius of 21cm. It made 250 revolutions. Find the distance covered by the wheel in kilometres.
A. 0.33 B. 16500
C. 33000 D. 0.165
49. In a school, the ratio of boys to girls is 7:4, while that of the teachers to girls is 2:5 respectively. If there are 24 teachers in the school, find the number of pupils in the school
A. 165 B. 105 C. 189 D. 180
50. Which of the following shapes should be drawn in the blank box?



- A. 
- B. 
- C. 
- D. 