

**THE INTERNATIONAL SCHOOL
(UNIVERSITY OF IBADAN)
ENTRANCE EXAMINATION TO JS1**

18TH MAY, 2009

**SUBJECT: MATHEMATICS
MINS**

TIME: 1 HR. 15

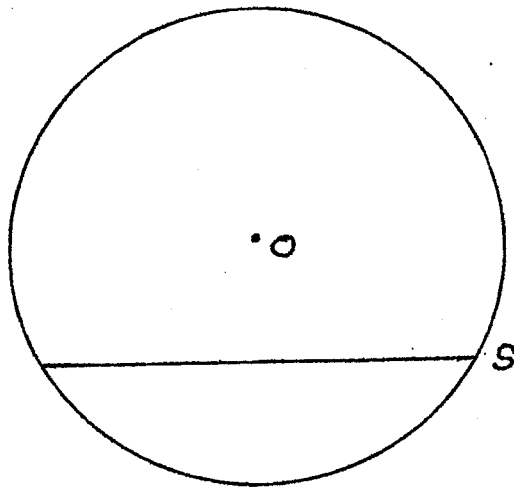
Do not open this paper until you are told to do so. While you are waiting, read the following instructions carefully

- a. Write your NUMBER and NAME in the space provided at the top of the answer sheet, putting your SURNAME first in capital letters.
- b. You must only use a pencil to SHADE the entire box. DO NOT TICK.
- c. Think carefully before choosing your answer to each question. When you have made your choice, look for the answer sheet of the question, then find the letter of the answer you have chosen, and shade in your answer.
- d. If you want to change an answer you must erase it completely, then shade in the new answer.
- e. Work as fast and as carefully as you can. When you have finished one page, go straight on to the next. The total number of questions is 50
- f. Submit your answer sheet to your invigilator.

1. Find the value of $\frac{1}{1+\frac{1}{3}}$
 (a) $\frac{1}{4}$ (b) $\frac{1}{3}$ (c) 7 (d) 4
2. If one-third of a pie is eaten, and one-half of the remainder is put in the freezer.
 What fraction of the pie is left out?
 (a) $\frac{5}{6}$ (b) $\frac{1}{2}$ (c) $\frac{2}{5}$ (d) $\frac{1}{3}$
3. A man sold a radio for N5600 after giving a discount of $12\frac{1}{2}\%$ from the list price. What was the list price?
 (a) N5000 (b) N6000 (c) N6300 (d) N6400
4. $33\frac{1}{3}\%$ of a number is equal to $12\frac{1}{2}\%$ of 24. What is the number?
 (a) 8 (b) 9 (c) 3 (d) 6
5. Simplify $(+3) (-6) (-2) - (-3)$
 (a) -2 (b) +33 (c) -8 (d) +39
6. A bucket is $\frac{1}{2}$ full of water. When 12 litres of water is added, it is $\frac{3}{4}$ full. How many litres will the bucket hold?
 (a) 48 litres (b) 42 litres (c) 36 litres (d) 35 litres
7. Ade is half his father's age now. If his father's age is now 52 years, what was their total age 5 years ago?
 (a) 66 years (b) 78 years (c) 68 years (d) 48 years
8. A man divides his marbles into piles of 3, 4 or 5 and have none left over each time. The smallest total number of marbles that he might have is
 (a) 12 (b) 20 (c) 30 (d) 60
9. What is the next term in the sequence below 1,3,7,15,31..... ?
 (a) 47 (b) 51 (c) 59 (d) 63
10. What is the positive difference between the place values of 2 and 5 in the number 63.0521 (a) 0.48 (b) 0.048 (c) 0.0048 (d) 0.00048
11. Reduce $\frac{270}{378}$ to its lowest term
 (a) $\frac{27}{37}$ (b) $\frac{3}{5}$ (c) $\frac{5}{7}$ (d) $\frac{2}{7}$
12. Approximate 7.283 to the nearest whole number.
 (a) 7.2 (b) 7 (c) 8 (d) 9
13. Evaluate $\frac{x(x-y)}{y^2}$ when $x=2$ and $y=-2$
 (a) 0 (b) $\frac{1}{2}$ (c) 2 (d) 8
14. Solve the equation $15 - 3k = 0$
 (a) 18 (b) 12 (c) 10 (d) 5
15. The length of a square is 7cm. Find its perimeter.
 (a) 14cm (b) 28cm (c) 49cm (d) 70cm

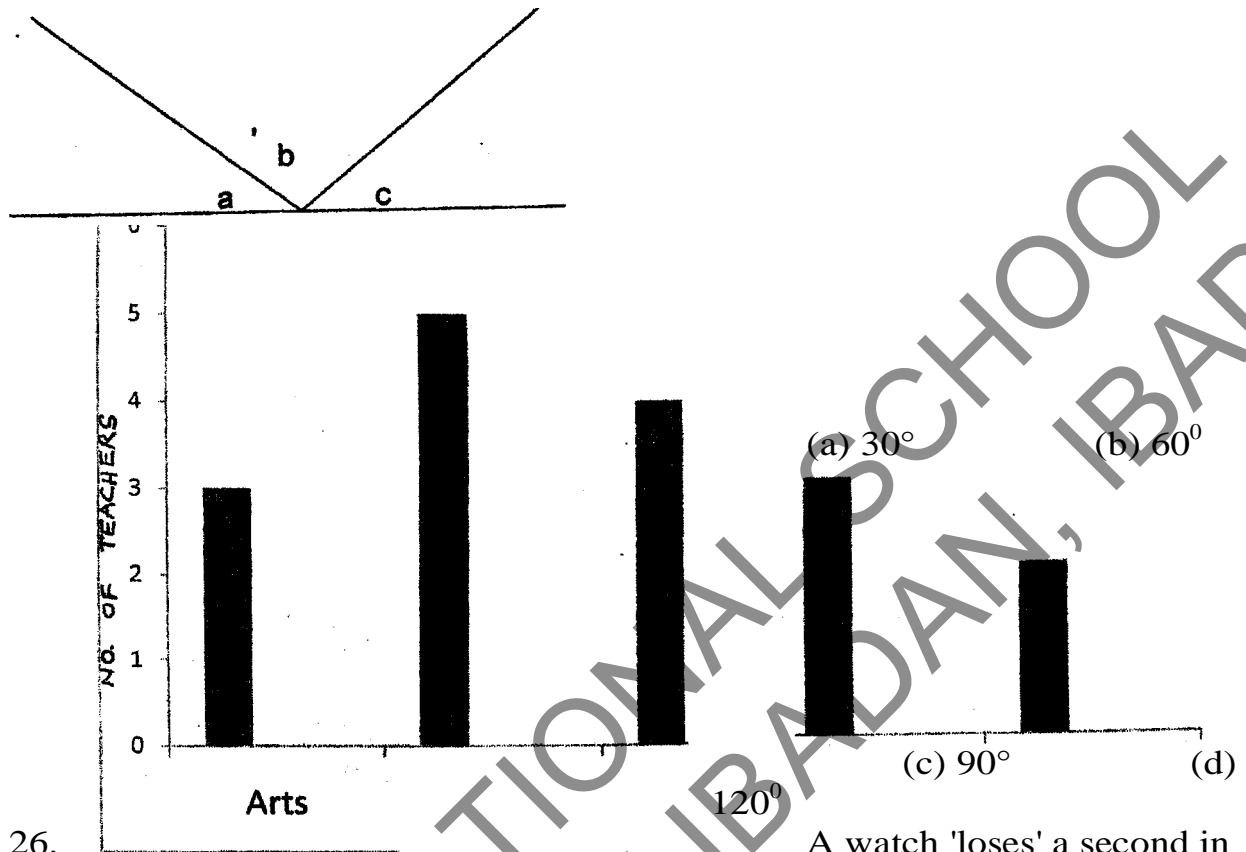
16. The most frequent occurring number in a set of numbers is called the
 (a) median class (b) median (c) mode (d) mean

17.



- In the diagram above the line QS is referred to as a
 (a) Circumference (b) diameter (c) symmetry (d) chord

18. Which of the following angles is reflex?
 (a) 67° (b) 137° (c) 150° (d) 200°
19. Decrease N36000 by 15%
 (a) N3600 (b) N5400 (c) N7200 (d) N30600
20. Simplify $x - 5x + 8x - 2x$
 (a) $2x$ (b) $3x$ (c) $4x$ (d) $5x$
21. Calculate the simple interest on N450000 which is borrowed for $1\frac{1}{2}$ years at 8% per annum.
 (a) N45 000 (b) N54 000 (c) N60 000 (d) N75 000
22. When recording data, the tally marks IIII IIII IIII III represents the number
 (a) 13 (b) 15 (c) 18 (d) 20
23. Find the mode of the following set of numbers 7,5,6,7,5,4,3,3,4,4
 (a) 8 (b) 7 (c) 6 (d) 4
25. If the angles a, b, and c are in the ratio 1: 3: 2, find the number of degrees in angles b

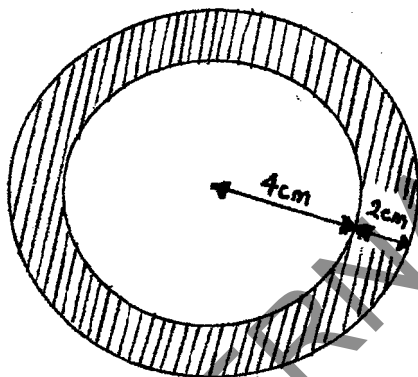


26. every minute. In a week, the watch loses

- (a) 16.8 minutes (b) 128 minutes
(c) 114 minutes (d) 168 minutes

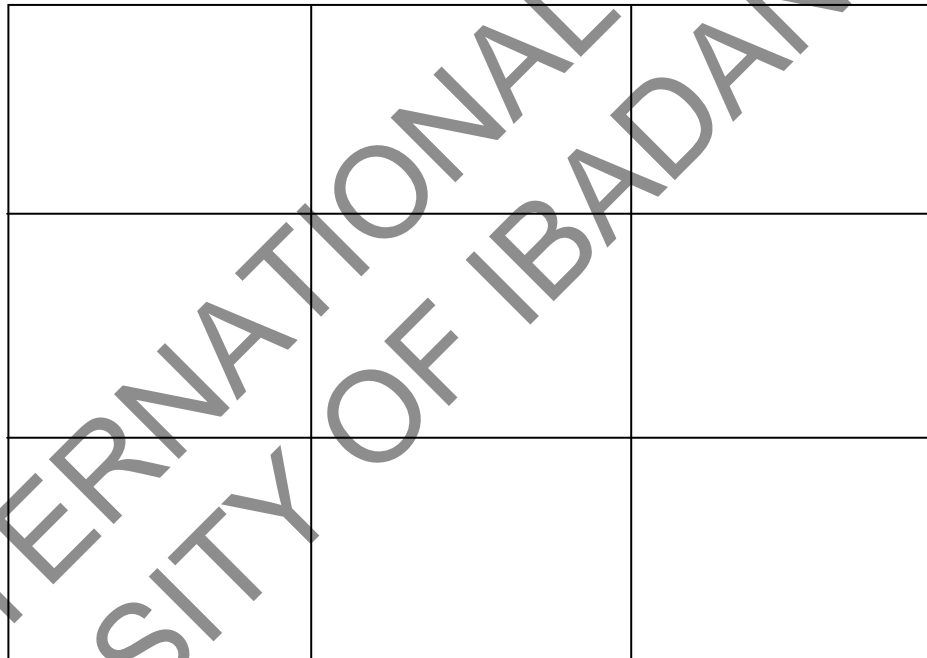
The bar chart below shows the number of teachers for the subjects in a school. Use the information to answer questions 27 and 28.

- 27 What fraction of the teachers are for Mathematics?
 (a) $\frac{3}{13}$ (b) $\frac{2}{17}$ (c) $\frac{4}{21}$ (d) $\frac{5}{16}$
- 28 How many teachers are there altogether?
 (a) 17 (b) 15 (c) 18 (d) 14
- 29 A man travels for 3 hours at 30 kilometers per hour, then increases his speed to 45 kilometers per hour for 2 hours. Find his average speed for the entire trip.
 (a) 30Km/h (b) 15Kmlh (c) 45Km/h (d) 36Kmlh
- 30 Given two concentric circles as shown in the diagram below. If the radius of the "smaller" circle, DA is 4cm and AS = 2cm, find the area of the shaded portion.
 (a) 36π (b) 20π (c) 16π (d) 4π



- 31 On a map, a line of length 3cm represents 9km. How many kilometers will a line of 4.8cm represent?
 (a) 8.4km (b) 10.4km (c) 12.4km (d) 14.4km
- 32 Each face of a cube is in the shape of a
 (a) square (b) rectangle (c) circle (d) triangle
- 33 Find P if $\frac{7}{3} = \frac{P}{33}$
 (a) P=33 (b) P=77 (c) P=99 (d) P=231
- 34 Two cylinders of radii 6cm and 18cm respectively. Find the ratio of their volumes.
 (a) 1 : 3 (b) 1 : 9 (c) 1 : 27 (d) 3 : 25
- 35 A T-shirt costs \$24. If \$1 = N140, what is the cost of the T-shirt in naira?
 (a) N1960 (b) N1906 (c) N1690 (d) N1609

36. What is the sum of the square roots of 144, 169 and 225?
 (a) 15 (b) 21 (c) 25 (d) 40
37. Add all odd numbers between 31 and 39 inclusive
 (a) 180 (b) 196 (c) 205 (d) 175
38. The average age of 7 girls presently is 15 years. What will be the total age of the girls in two years time?
 (a) 119 years (b) 108 years (c) 112 years (d) 132 years
39. What is $C^2 - N^2$ when $C = 1\frac{3}{4}$ and $N = 1\frac{1}{4}$?
 (a) $2\frac{1}{2}$ (b) $1\frac{1}{2}$ (c) $1\frac{1}{4}$ (d) 1
40. Ade is a year older than Olu, and Olu is a year older than Yinka. If their total age is 30 years, how old is Yinka?
 (a) 13 years (b) 10 years (c) 9 years (d) 6 years
41. The diagram below is made up of squares. How many right angles are there?



- (a) 36 (b) 30 (c) 24 (d) 20
42. Which of the following solid objects can roll smoothly on a flat surface?
 (a) Cuboid (b) Cone (c) Cylinder (d) Nokia cell phone
43. Find the capacity of a rectangular tank which measures 15m by 12m by 10m.
 Give your answer in litres.
 (a) 1800 litres (b) 180 litres (c) 18 litres (d) 0.0018 litre
44. Find the total weight of 7 tins of milk if each tin weighs 225 grammes?

- (a) 157.5kg (b) 15.75kg (c) 1.575kg (d) 0.1575kg
- 45 A girl has three N20 notes, seven N10 notes and ten N1 coins. After spending N68, how much did she have left?
- (a) N27 (b) N62 (c) N52 (d) N72
- 46 A school has 575 pupils. 44% of the pupils are boys. How many girls are in the school?
- (a) 322 (b) 332 (c) 233 (d) 323
- 47 A boy spent $\frac{1}{5}$ of his money on transport fare, $\frac{1}{10}$ on food, and $\frac{2}{7}$ of the remainder on books and he was left with N900. What was his original amount?
- (a) N4500 (b) N1800 (c) N3000 (d) N5000
48. Divide 0.025 by 0.25
- (a) 0.0001 (b) 0.001 (c) 0.01 (d) 0.1
49. 6 men can do a piece of work in 4 days. How long will it take 8 men to do it, if they work at the same rate?
- (a) 5 days (b) 4 days (c) 3 days (d) 2 days
- 50 By how much is CMXI less than MCXI
- (a) CXC (b) CC (c) MX (d) (d) MCIX