

**THE INTERNATIONAL SCHOOL
UNIVERSITY OF IBADAN**

2014/2015 ENTRANCE EXAMINATION INTO JS1

MATHEMATICS

1. Simplify $-7 - (-16) - 3$
A. -20
B. 6
C. -9
D. -26
E. -36
2. The most frequently occurring value in a set of data is known as
A. median B. mean C. average D. mode E. frequency
3. If $x = -2$, $y = -4$ and $z = 0$, what is the value of $2x - (2xz - 4y)$
A. 12 B. -12 C. 15 D. 20 E. -20
4. What is the median of the following numbers: 9, 12, 10, 9, 12, 16, 9, 14?
A. 9 B. 10 C. 11 D. 12 E. 13
5. The mode of the data in the question above is
A. 9 B. 10 C. 11 D. 12 E. 14
6. A student goes on shopping with ₦ x . He spent ₦5,000 and has ₦400 left.
What is the value of x ?
A. ₦5,000 B. ₦5,040 C. ₦4,400 D. ₦4,000 E. ₦5,400
7. Simplify $7x - 4x + 3x + 6x$
A. $7x$ B. $9x$ C. $10x$ C. $12x$ D. $14x$
8. Simplify $6x - 2y - (-7y + 3x)$
A. $y - x$

B. $3x + 5y$

C. $9x + 9y$

D. $3x - y$

E. $3x - 5y$

9. Solve the equation $\frac{24}{x} = \frac{5}{2}$

A. $x = 1\frac{1}{2}$

B. $x = 2.1$

C. $x = 3.6$

D. $x = 4.5$

E. $x = 9.6$

10. The circumference of a circle is given as 132cm. Find its area. ($\pi = \frac{22}{7}$)

A. 21cm^2

B. 42cm

C. 1386cm^2

D. 105cm^2

E. 200cm^2

11. Simplify $5\frac{1}{6} - 3\frac{2}{3} + 6\frac{7}{12}$

A. $8\frac{1}{12}$

B. $7\frac{3}{4}$

C. $25\frac{1}{2}$

D. $-9\frac{7}{12}$

E. $8\frac{17}{12}$

12. Express 7 minutes 30 seconds as a fraction of one hour

A. $1\frac{1}{2}\text{h}$

B. $\frac{1}{8}\text{h}$

C. $\frac{7}{8}\text{h}$

- D. $\frac{1}{6}h$
E. $\frac{1}{7}h$

13. Decrease 720 by $16\frac{2}{3}\%$

- A. 580
B. 600
C. 1050
D. 2000
E. 2400

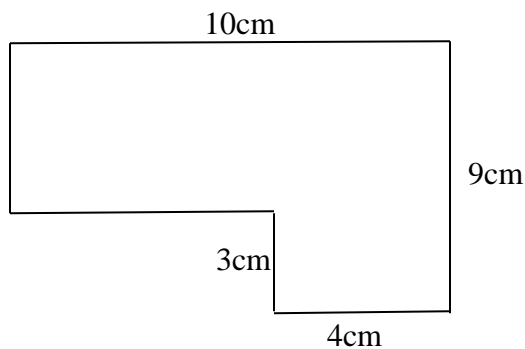
14. A rectangle is 3m long and its perimeter is 11m. Find its area

- A. $2.5m^2$
B. $6m^2$
C. $7.5m^2$
D. $10.5m^2$
E. $15m^2$

15. The tally marks HH HH HH HH II represent the number

- A. 26
B. 25
C. 24
D. 23
E. 22

16. Calculate the area of the shape below



- A. 26 cm^2
B. 38 cm^2
C. 62 cm^2
D. 72 cm^2

E. 90cm^2

17. Express 2500cm^3 in litres
- A. 2.5 litres
 - B. 25 litres
 - C. 250 litres
 - D. 2500 litres
 - E. 25000 litres
18. Find the simple interest paid on ₦2,400 for 6 months at a rate of 3% per annum.
- A. ₦7.50
 - B. ₦36.00
 - C. ₦42.50
 - D. ₦140
 - E. ₦240
19. Write the number 2014 in roman numerals
- A. MCMXXXIV
 - B. MMCXXIV
 - C. CMMXXXVI
 - D. MMXIV
 - E. MMXIII
20. Express 880 as a product of its prime factors. Leave your answer as index
- A. $2^6 \times 5$
 - B. $2^7 \times 5$
 - C. $2^3 \times 5 \times 11$
 - D. $2^4 \times 5 \times 11$
 - E. $3^3 \times 2^4 \times 11$
21. What is the place of the digit 7 in the number 40.01078?
- A. 7 tenths
 - B. 7 ten thousandths
 - C. 7 thousandths
 - D. 7 hundred
 - E. 7 hundredths
22. Divide the L.C.M. of 24, 28, 36 and 50 by the product of 2 and 3.
- A. 700

- B. 820
- C. 1200
- D. 2100
- E. 12600

23. Simplify the expression $\frac{60a^5b^4c^2}{48a^4b^4c^3}$

- A. $\frac{5a}{4c}$
- B. $\frac{5ac}{4}$
- C. $\frac{5}{4ac}$
- D. $\frac{5abc}{4}$
- E. $\frac{4abc}{5}$

24. A boy eats $\frac{1}{4}$ of a loaf of bread at breakfast and $\frac{5}{8}$ at lunch. What fraction of the loaf is left?

- A. $\frac{7}{8}$
- B. $\frac{3}{5}$
- C. $\frac{1}{8}$
- D. $1\frac{5}{9}$
- E. $1\frac{3}{9}$

25. A trader sells x pencils at ₦90 each, y pencils at ₦120 each and 5 rubbers at ₦ x each. How much money does the trader gets altogether?

- A. ₦(90 + 120y)
- B. ₦(95x + 120y)
- C. ₦215xy
- D. ₦120x + 80xy
- E. ₦(85x + 120y)

26. Calculate $10.71 \div 63$

- A. 1.7
- B. 170

- C. 0.17
- D. 0.0017
- E. 0.017

27. Find the difference between x metres and $7x$ cm. Give your answer in cm

- A. $107x$ cm
- B. $8x$ cm
- C. $\frac{7x}{x}$ cm
- D. $93x$ cm
- E. $95x$ cm

28. Which of the following is the lowest? $-3, -5, 0, -18, -14, -7$

- A. -18
- B. -14
- C. -7
- D. -5
- E. 0

29. The length of a rectangle is $2x$ metres and its width is 2 metres shorter than its length. What is the area of the rectangle?

- A. $(4x^2 - 18)m^2$
- B. $(4x^2 - 6)m^2$
- C. $(8x - 4)m^2$
- D. $(4x^2 - 4x)m^2$
- E. $(4x^2 - 2x)m^2$

30. Simplify $\sqrt[3]{512} - \sqrt{64}$

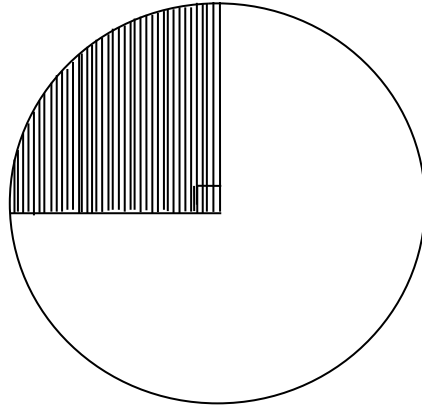
- A. 0
- B. 1

- C. 4
- D. 8
- E. 10

31. A housewife spent $\frac{3}{7}$ of her money in the market and $\frac{1}{2}$ of the remainder in the shop. The fraction of her money left is
- A. $\frac{1}{7}$
 - B. $\frac{2}{7}$
 - C. $\frac{5}{7}$
 - D. $\frac{3}{4}$
 - E. $\frac{1}{2}$
32. Given that $a = 3$, $b = -3$, then $\frac{a^2 + b^2}{(ab)^2}$ is
- A. 81
 - B. -18
 - C. $\frac{2}{9}$
 - D. $-\frac{2}{81}$
 - E. 18
33. If 6 pencils cost ₦10.80, then 13 pencils would cost
- A. ₦23.40
 - B. ₦23.90
 - C. ₦25.90
 - D. ₦26.90
 - E. ₦27.90
34. The average of 8, 9, 8, 11, 26, 22 is
- A. 14
 - B. 15
 - C. 16
 - D. 17
 - E. 18
35. A piece of ribbon is cut up in the proportion of 2:3:4. If the greatest piece is 16cm, then the length of the original piece of ribbon is
- A. 24cm
 - B. 36cm
 - C. 42cm
 - D. 63cm

E. 144cm

36.



The figure above shows a quadrant of a circle. Express the unshaded portion as a percentage of the whole circle.

A. 22%

B. $20\frac{1}{2}\%$

C. $130\frac{1}{3}\%$

D. $21\frac{2}{3}\%$

E. 75%

37. A wrist watch which cost ₦300.00 was sold at a profit of 20%. Its selling price was

A. ₦200.00

B. ₦200.40

C. ₦360.00

D. ₦204.00

E. ₦204.80

38. A cube of 4 added to a cube root 8 is

A. 60

B. 62

C. 66

D. 80

E. 81

39. A polygon with seven sides is called

- A. Pentagon
- B. Heptagon
- C. Octagon
- D. Hexagon
- E. Nonagone

40. Which of the following numbers does not belong to the group?
- A. 1
 - B. 11
 - C. 21
 - D. 31
 - E. 51
41. The Roman Numeral CXCIV represents
- A. 194
 - B. 196
 - C. 214
 - D. 215
 - E. 216
42. If 20% of a number is 20, find the number.
- A. 120
 - B. 100
 - C. 80
 - D. 60
 - E. 40
43. The following are quadrilaterals except?
- A. circle
 - B. parallelogram
 - C. rectangle
 - D. square
 - E. trapezium
44. A square has the same perimeter as a 5cm by 7cm rectangle. Which of the following is the area of the square?
- A. 9cm^2
 - B. 25cm^2
 - C. 35cm^2
 - D. 36cm^2

E. 46cm^2

45. Simplify $3a - (9a - 5b)$

- A. $a + 5b$
- B. $6a - 5b$
- C. $5b - 6a$
- D. $-6a - 5b$
- E. $-5b + 6a$

46. Which of the following shapes has four lines of symmetry?

- A. Square
- B. Cube
- C. Rectangle
- D. Kite
- E. Parallelogram

47. Find the value of

$$\sqrt[3]{8^3 \times \sqrt{1/64}}$$

- A. 2
- B. 4
- C. 6
- D. 8
- E. 16

48. Which of the following is not equivalent to $\frac{1}{2}$?

- A. $\frac{9}{18}$
- B. $\frac{11}{22}$
- C. $\frac{15}{30}$
- D. $\frac{16}{32}$
- E. $\frac{24}{42}$

49. The smaller angle between the hands of a clock at 2'o clock is

- A. 2°
- B. 24°
- C. 30°
- D. 50°
- E. 60°

50. The sum of x minutes and y seconds, expressed in minutes is

A. $60x + y$

B. $x + 60y$

C. $\frac{x + y}{60}$

D. $\frac{x}{60} + y$

E. $x + \frac{y}{60}$

51. A farmer buys n sheep at ₦ a each and sells them at ₦ b each. Which of the following is his profit in naira?

A. $an - bn$

B. $bn - an$

C. $a - b$

D. $\frac{b - a}{n}$

E. $ab - an$

52. Find the sum of 2573, 208 and 56

A. 1837

B. 2725

C. 2781

D. 2827

E. 2837

53. Write ten thousand, one hundred and ninety in figure

A. 1090

B. 10191

C. 10119

D. 10019

E. 10190

54. The sum of two numbers is 1532, one of them is 946. What is the second number?

- A. 2478
- B. 582
- C. 584
- D. 576
- E. 586

55. Find the value of 7 in 34.072

- A. 7
- B. $\frac{7}{10}$
- C. $\frac{10}{7}$
- D. $\frac{7}{100}$
- E. $\frac{7}{1000}$

56. What is the difference between 99 and 1000?

- A. 1099
- B. 109
- C. 900
- D. 1
- E. 901

57. Find the product of the prime numbers between 1 and 6

- A. 10
- B. 15
- C. 24
- D. 30
- E. 48

58. Express 23.067 correct to 2 decimal places

- A. 23.07
- B. 23.10
- C. 23.16
- D. 23.67
- E. 23.77

59. Subtract two thousand and forty five from five thousand and six

- A. 2901
- B. 2906
- C. 2916
- D. 2691
- E. 2961

60. Divide 25.12 by 8

- A. 31.2
- B. 31.4
- C. 3.12
- D. 3.13
- E. 3.14