

**THE INTERNATIONAL SCHOOL  
UNIVERSITY OF IBADAN**

**2015/2016 ENTRANCE EXAMINATION INTO JS1**

**MATHEMATICS**

1. A number is chosen at random between 1 and 10 inclusive. What is the probability that it is a prime number?  
A.  $\frac{1}{10}$   
B.  $\frac{2}{5}$   
C.  $\frac{1}{2}$   
D.  $\frac{9}{10}$   
E.  $\frac{3}{10}$
2. Find the value of y given that  $\frac{1}{2} - \frac{6}{y} = 2$   
A. -4  
B. 4  
C. 6  
D. 7  
E. 12
3. If  $\alpha^2 = 16 \times 144 \times 25$ , find  $\alpha$ .  
A. 120  
B. 180  
C. 240  
D. 280  
E. 320
4. 24 students in a class of 40 students are boys. Find the ratio of girls to the boys.  
A. 3:2  
B. 2:3  
C. 1:3  
D. 3:1  
E. 2:1
5. If  $\frac{y}{3} + 1 = 5$ , find y.  
A. 10  
B. 11

- C. 12
- D. 13
- E. 15

6. How many leaves are there in 40-leave and two 60-leave exercise books?

- A. 180
- B. 160
- C. 120
- D. 110
- E. 100

7. Find the total weight of 5 packets of sugar, if each weigh 450 gramms

- A. 2.25kg
- B. 2.05kg
- C. 1.25kg
- D. 2.15kg
- E. 2.52kg

8. A room is 15m long, 8m wide and 5m high. Find the area of the floor.

- A.  $120\text{m}^2$
- B.  $75\text{m}^2$
- C.  $40\text{m}^2$
- D.  $60\text{m}^2$
- E.  $600\text{m}^2$

9. Increase 150 by 60%

- A. 90
- B. 120
- C. 240
- D. 280
- E. 300

10. Find the value of  $\frac{1}{\sqrt{9}} + \frac{1}{\sqrt{16}}$

- A.  $\frac{7}{12}$
- B.  $\frac{1}{2}$
- C.  $\frac{5}{12}$
- D.  $\frac{5}{8}$
- E.  $\frac{1}{7}$

11. On a map, 1cm represents 85.6km, what does a length of 5cm on the map represent?

- A. 360km
- B. 380km
- C. 420km
- D. 428km
- E. 482km

12. How many numbers are there between 10 and 29 that are divisible by 3?

- A. 4
- B. 5
- C. 6
- D. 7
- E. 8

13. Find which of the following fractions has the same value as  $\frac{8}{11}$

- A.  $\frac{8 \times 3}{11 + 3}$
- B.  $\frac{8 - 3}{11 - 3}$
- C.  $\frac{8 + 3}{11 + 3}$
- D.  $\frac{8 \times 3}{11 \times 3}$
- E.  $\frac{8 + 3}{11 - 3}$

14. Which of the following is not a member of the group?

- A. Square
- B. Rectangle
- C. Parallelogram
- D. Triangle
- E. Rhombus

15. The volume of a cuboid is  $280\text{cm}^3$ . If the length is 8cm and the breadth is 7cm, find the height.

- A. 5cm
- B. 15cm
- C. 35cm
- D. 40cm
- E. 56cm

16. Express five thousand and seventy-two in figures

- A. 50072
- B. 5702
- C. 5072
- D. 5720
- E. 5027

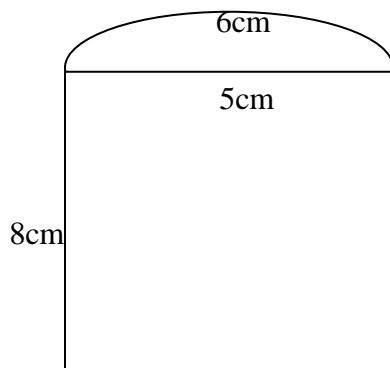
17. If I walk at an average speed of 14km per hour, how far will I go in 3 hours 30 minutes?

- A. 49km
- B. 42km
- C. 36km
- D. 28km
- E. 14km

18. Simplify  $125\text{g} + 10\text{kg}$

- A. 425g
- B. 4250g
- C. 10125g
- D. 11250g
- E. 135g

19. Find the perimeter of the figure below.



- A. 40cm
- B. 30cm
- C. 28cm
- D. 27cm
- E. 21cm

20. In a nursery class of 18 pupils, the average age is  $4\frac{1}{2}$  years. What is the sum of the ages of the pupils?

- A. 18 years
- B.  $22\frac{1}{2}$  years
- C. 72 years
- D.  $72\frac{1}{2}$  years
- E. 81 years

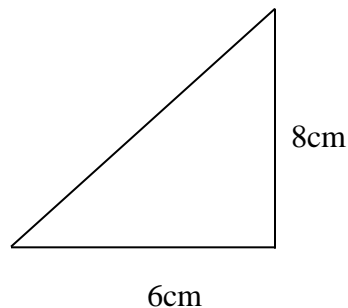
21. What is the smallest number that can be divided by 2, 3 and 5?

- A. 6
- B. 10
- C. 15
- D. 30
- E. 60

22. Multiply the L.C.M. of 4 and 10 by their H.C.F.

- A. 10
- B. 20
- C. 40
- D. 80
- E. 160

23. Find the area of the figure below



- A.  $24\text{cm}^2$
- B.  $30\text{cm}^2$

- C.  $40\text{cm}^2$   
D.  $48\text{cm}^2$   
E.  $84\text{cm}^2$
24. Find the sum of all the multiples of 4 between 30 and 39.  
A. 64  
B. 68  
C. 69  
D. 72  
E. 108
25. Express 750g as a fraction of 2kg  
A.  $\frac{3}{4}$   
B.  $\frac{3}{8}$   
C.  $\frac{3}{5}$   
D.  $\frac{2}{750}$   
E.
26. A student had a score of 60% in Mathematics. How many marks out of 125 marks did he obtain?  
A. 125  
B. 120  
C. 100  
D. 90  
E. 75
27. If  $P^2 - 36 = 64$ , what is the value of P?  
A. 10  
B. 8  
C. 6  
D. 5  
E. 4
28. If  $x^2 - y^2 = (x + y)(x - y)$ , find the value of  $7.9^2 - 2.1^2$   
A. 580  
B. 58  
C. 5.8  
D. 0.58  
E. 0.058

29. If  $X + Y + Z = 180^0$  and  $x + y = 70^0$ , what is the value of  $Z$ ?
- $250^0$
  - $120^0$
  - $110^0$
  - $55^0$
  - $45^0$
30.  $M$  pencils cost  $x$  Naira and  $N$  pens cost  $y$  naira. What is the cost of 10 pencils and 5 pens?
- $Mx + Ny$ ) Naira
  - $5(Mx + Ny)$  Naira
  - $(10Mx + Ny)$  Naira
  - $\left[ \frac{10x}{M} + \frac{5y}{N} \right]$  Naira
  - $\left[ \frac{10x}{M} + \frac{5y}{N} \right]$  Naira
31. A stick 60cm long is cut at 40cm mark, find the ratio of the lengths of the two pieces.
- 2:3
  - 1:3
  - 1:2
  - 2:5
  - 3:2
32. Charles is 0.04m taller than Emeka. If Emeka's height is 1.48m, what is Charles's height?
- 1.88m
  - 1.52m
  - 1.44m
  - 1.40m
  - 1.42m
33. A woman went to the market with ₦4000.00. She spent  $\frac{1}{2}$  of the money on foodstuff,  $\frac{1}{2}$  of the remainder on dresses and ₦600 on toiletries. If he spent ₦100 on transport, how much balance did she bring back?

- A. ₦100.00
  - B. ₦50.00
  - C. ₦30.00
  - D. ₦300.00
  - E. No change
34. A packet of 600 bolts weighs 1kg. If each bolt weighs  $1\frac{1}{2}$ g, what is the weight of the container in which the bolts are packed?
- A. 900g
  - B. 700g
  - C. 400g
  - D. 300g
  - E. 100g
35. A test requires 2 hours to attempt five questions. If a candidate spent 80 minutes on the first two questions, what fraction of the time did he spend on the remaining three questions?
- A.  $\frac{2}{3}$
  - B.  $\frac{1}{3}$
  - C.  $\frac{1}{2}$
  - D.  $\frac{1}{4}$
  - E.  $\frac{3}{4}$
36. An athlete made 10.2m, 8.4m and 11.4m throws in a competition, find the average throw of the athlete
- A. 15m
  - B. 10.2m
  - C. 10m
  - D. 8.4m
  - E. 8m
37. A tank is 2m long, 1m wide and 500cm high. Find the volume in cubic metre.
- A.  $100\text{m}^3$
  - B.  $10\text{m}^3$
  - C.  $8\text{m}^3$
  - D.  $7\text{m}^3$
  - E.  $1\text{m}^3$
38. Olu's wrist watch loses 2 minutes every 1 hour. If the wrist watch is



adjusted correctly at 2.00pm, what will it read when the correct time is 10.00pm?

- A. 9.52pm
- B. 9.50pm
- C. 9.48pm
- D. 9.46pm
- E. 9.44pm

39. A packet of 60 bulbs was found to contain 15 bad ones. What percentage of the bulbs are good?

- A. 75%
- B. 45%
- C. 25%
- D. 15%
- E. 10%

40. A student running 100m race fell down at 80m mark. What percentage of the distance was not completed?

- A. 80%
- B. 75%
- C. 20%
- D. 10%
- E. 5%

41. The average score of 30 students in a Mathematics test is 6. If 28 out of these students score a sum of 160 marks, find the average mark of the two remaining students.

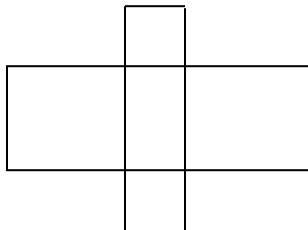
- A. 20
- B. 10
- C. 6
- D. 4
- E. 3

42. A sales representative is paid a commission of ₦5 on every ₦100 sale he makes. If his commission for the week is ₦10,000.00, how much sales has he made?

- A. ₦2,000,000
- B. ₦200,000
- C. ₦20,000
- D. ₦10,000

E. ₦2,000

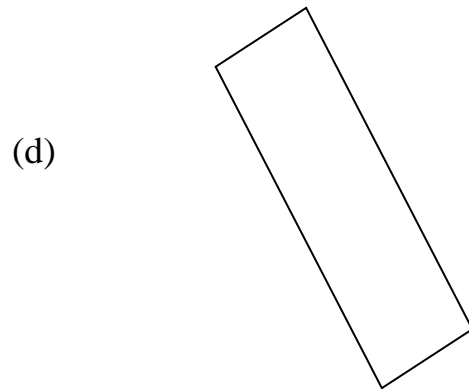
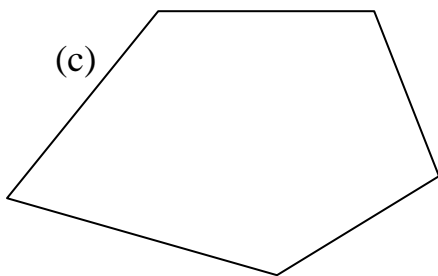
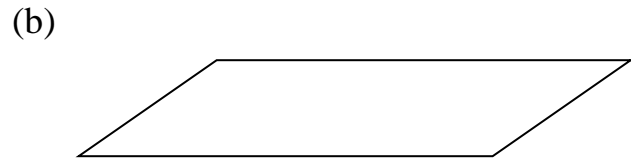
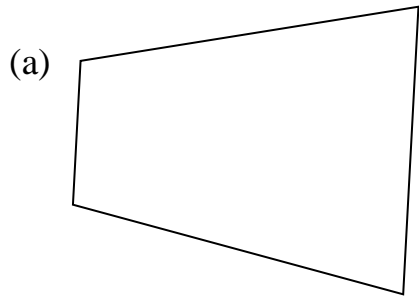
43. A spider walks round a square of side 8cm ten times, calculate the distance the spider has covered in cm.  
A. 320cm  
B. 160cm  
C. 40cm  
D. 32cm  
E. 16cm
44. A baby was born on 1st July. How old will the baby be on 31st of the following December.  
A. 186days  
B. 185days  
C. 184days  
D. 183days  
E. 180days
45. Express the difference between 0.35 and  $\frac{2}{5}$  as a decimal  
A. 0.75  
B. 0.5  
C. 0.4  
D. 0.075  
E. 0.05
46. If a circle is divided into 8 equal parts, 6 parts are shaded; what percentage is the unshaded parts?  
A. 20%  
B. 25%  
C. 30%  
D. 60%  
E. 75%
47. What solid can be obtained with the net in the figure below?



- A. open cuboid
  - B. closed cuboid
  - C. cube
  - D. cylinder
  - E. cone
48. Simplify  $120^2 - 110^2$
- A. 100
  - B. 163
  - C. 1630
  - D. 2300
  - E. 2303
49. Find the reciprocal of  $\frac{1}{3}$
- A.  $-3$
  - B.  $-\frac{1}{3}$
  - C. 0.33
  - D. 3
  - E. 0.3
50. Which of these best describes the positive difference between the largest and the smallest numbers in a set of numbers?
- A. Range
  - B. Mode
  - C. Median
  - D. Frequency
  - E. Mean
51. Three bells toll at intervals of 3 minutes, 6 minutes and 8 minutes. If they toll together at 12:00 hours, when will they toll together again?
- A. 12:03pm
  - B. 12:06pm
  - C. 12:08pm
  - D. 12:24pm
  - E. 12:36pm
52. The sides of two squares are 5cm and 10cm respectively. Find the ratio of their areas

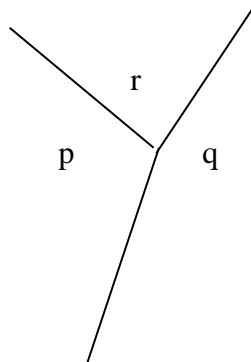
- A. 1:2
  - B. 1:3
  - C. 3:5
  - D. 1:4
  - E. 1.5
53. If  $90^0$  is called a right angle, how many right angles are there in  $1530^0$ ?
- A. 170
  - B. 153
  - C. 17
  - D. 15
  - E. 13
54. Which of the following is NOT a plane figure?
- A. Triangle
  - B. Rectangle
  - C. Rhombus
  - D. Square
  - E. Cone
55. The diameter of a circle is 10cm. Find the perimeter of the circle, leave your answer in terms of  $\pi$ .
- A.  $5\pi\text{cm}$
  - B.  $10\pi\text{cm}$
  - C.  $15\pi\text{cm}$
  - D.  $20\pi\text{cm}$
  - E.  $25\pi\text{cm}$
56. The heights of the four girls in a class are 1.8m, 1.2m, 1.6m and 1.4m. What is their average height?
- A. 6m
  - B. 4m
  - C. 1.5m
  - D. 1.2m
  - E. 1.1m

57. Which of the following figures below is not a quadrilateral?



- A. b
- B. d
- C. a
- D. c
- E. None of the above

58.

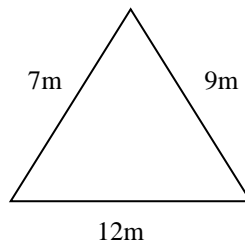


In the diagram above, if  $p = q = r$ , find the value of  $3p - 2q + r$

- A.  $150^\circ$

- B.  $180^0$
- C.  $320^0$
- D.  $240^0$
- E.  $120^0$

59. Find the semi-perimeter of the triangle below



- A. 25m
  - B. 14m
  - C. 18m
  - D. 32m
  - E. 28m
60. What is the size of each angle of a regular pentagon?
- A.  $72^0$
  - B.  $108^0$
  - C.  $144^0$
  - D.  $120^0$
  - E.  $180^0$