

MOCK TEST – Grade 8

Total Marks: 100

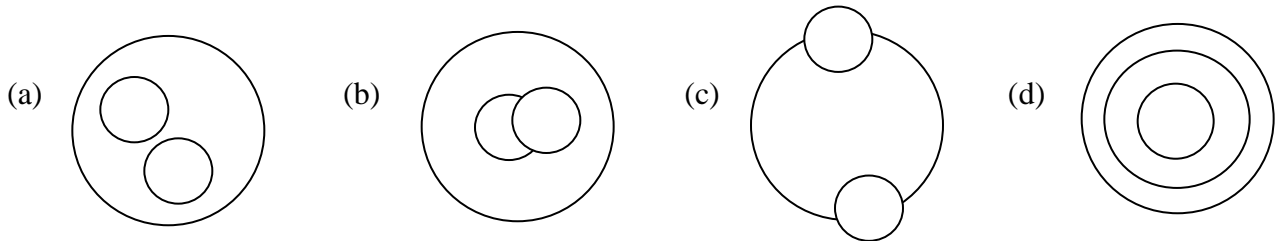
Time Duration: 1 hour

Section: Logical Reasoning

Question 1: Alka travels 12 km towards north, then turns right and travels 5 km and reaches the Primary health center. What is the shortest distance between the Primary health center and starting point?

- (a) 5 km
- (b) 12 km
- (c) 13 km
- (d) 14 km

Question 2: Which of the following Venn diagrams correctly illustrates the relationship between the following: District, Country, State



Question 3: Find the next number of the sequence 2, 11, 23, 51, ...

- (a) 123
- (b) 119
- (c) 83
- (d) 79

Question 4:31,46,58_

Find the largest possible missing digit, so that the number is divisible by 3

- (a) 3
- (b) 5
- (c) 7
- (d) 9

Question 5: Complete the sequence

RBC, SDE, TFG, _ _ _ , VJK

- (a) UIH
- (b) UHI
- (c) HUI
- (d) None of the above

Question 6:Statement 1- Diagonals of parallelogram bisect one another.

Statement 2 – Diagonals of Rhombus bisect each other at right angles.

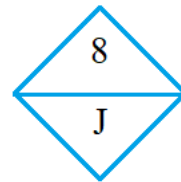
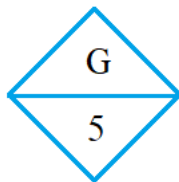
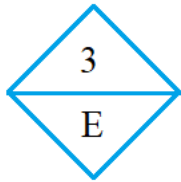
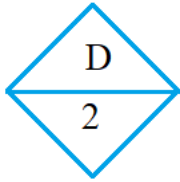
Which of the options are correct?

- (a) Only statement 1 is true
- (b) Only statement 2 is true
- (c) Both statements are true
- (d) Neither statement 1 is true nor the statement 2 is true.

Question 7:Which of the following statements are not true?

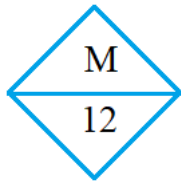
- (a) A Polyhedron can have 6 Faces, 8 Vertices and 12 Edges
- (b) A Polyhedron can have 8 Faces, 13 Vertices and 18 Edges
- (c) A Polyhedron can have 5 Faces, 6 Vertices and 9 Edges
- (d) A Polyhedron can have 10 Faces, 16 Vertices and 24 Edges

Question 8: Which would be the next figure of the series

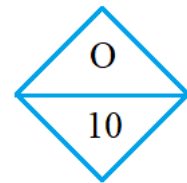


(a)

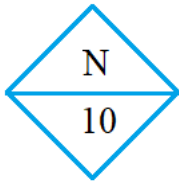
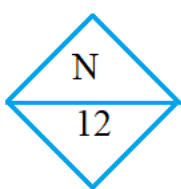
(b)



(c)



(d)



Question 9: If $\star + \bullet = 2 \blacklozenge$ and $\blacklozenge + \oplus = \star$ Which of the following are correct?

(a) $\star + \oplus = \bullet + \blacklozenge$

(b) $\star + \blacklozenge = \bullet + \oplus$

(c) $\star + \blacklozenge = 2 \oplus$

(d) $\star + \blacklozenge = 2 \bullet$

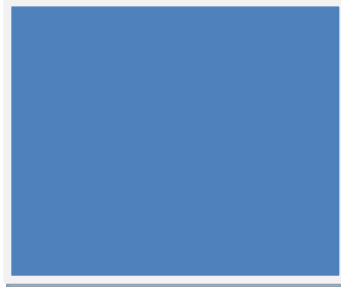
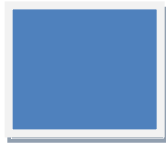
Question 10: If '+' means '×', '÷' means '+', '-' means '÷', and '×' means '-'. Find the value of the expression:

$$12+16\times 48-8\div 14$$

- (a) 160
- (b) 180
- (c) 200
- (d) 220

Section: Mental Math

Question 11: If Area of smaller and bigger square is 16 cm^2 and 256 cm^2 respectively, then What is the scale factor of the square?



- (a) 16
- (b) 4
- (c) 2.5
- (d) 12



Question 12: If a:b is 6:7 and b:c is 5:3, then a:c is

- (a) 10:7
- (b) 2:7
- (c) 2:1
- (d) 4:7

Question 13: How many rectangles of the same length and width can have the area 30 cm^2 ?

- (a) 4
- (b) 6
- (c) 8
- (d) 10

Question 14: Find the value of $x - y$ if $x + y = 14$ and $xy = 48$

- (a) 4
- (b) 9
- (c) 3
- (d) 2

Question 15: Simplify: $\frac{(7)^{-6} \times (2)^{-6}}{(14)^{-9} \times 7^2} + \frac{(2)^{-2}}{(2)^{-5}}$

- (a) 6^2
- (b) 8^2
- (c) 9^2
- (d) 7^2

Question 16: If the Number N when divided by 5 leaves a remainder 4, what might be the ones digit of N?

- (a) 6
- (b) 2
- (c) 3
- (d) 4

Question 17: Which of the following statements are wrong?

- (a) All rectangles are squares
- (b) All rhombuses are parallelograms
- (c) All rhombuses are kites
- (d) All squares are rhombuses

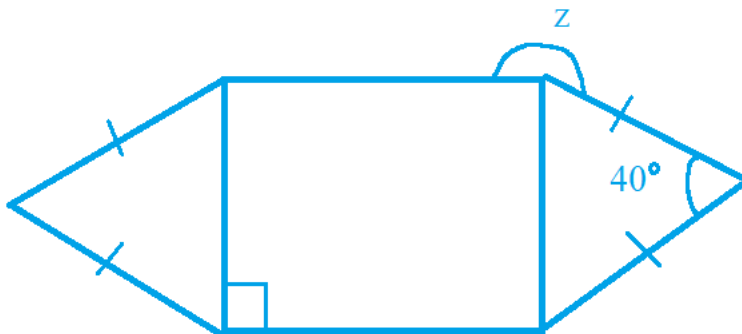
Question 18: Sana rolls a dice, what is the chance of her getting an even prime number?

- (a) $\frac{1}{3}$
- (b) $\frac{1}{2}$
- (c) $\frac{1}{6}$
- (d) None of the above

Question 19: $25^2 \times 125^3$, Can be rewritten as

- (a) 5^{10}
- (b) 5^{13}
- (c) 5^8
- (d) 5^{12}

Question 20: The value of angle z is



- (a) 160°
- (b) 180°
- (c) 200°
- (d) Cannot be determined

Question 21: The value of following expression is

$$\frac{(163 + 96)^2 - (163 - 96)^2}{163 \times 96}$$

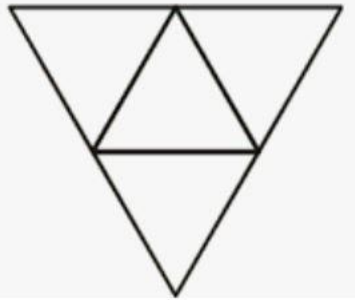
- (a) 2
- (b) 4
- (c) 6
- (d) 8

Question 22: Simplify:

$$\left(\frac{y^a}{y^{-b}}\right)^{(a-b)} \times \left(\frac{y^b}{y^{-b}}\right)^b$$

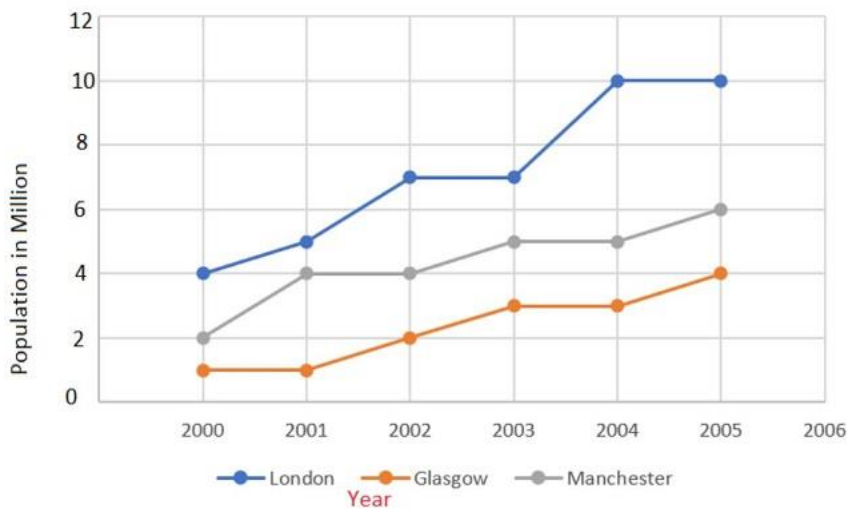
- (a) 1
- (b) 0
- (c) $y^{a^2+b^2}$
- (d) $y^{a^2-b^2}$

Question 23: Name the figure with the following net



- (a) Triangular Prism
- (b) Cone
- (c) Triangular Pyramid
- (d) None of the above

Question 24: The graph below shows the population growth of three cities



In which year the population of London was 2 million more than the combined population of Manchester and Glasgow?

- (a) 2001
- (b) 2002
- (c) 2003



(d) 2004

Question 25: If volume and height of a cylinder are $2,310 \text{ cm}^3$ and 15 cm respectively, What is total area of its flat faces?

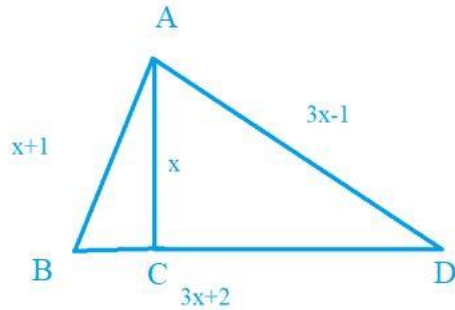
- (a) 308 cm^2
- (b) 300 cm^2
- (c) 312 cm^2
- (d) 320 cm^2

Section: Math

Question 26: In a sale original price of a garment was reduced by $\frac{1}{5}$. The Sale price of the garment Rs.1,432. What is its original price?

- (a) Rs. 1,500
- (b) Rs. 1,790
- (c) Rs. 1,800
- (d) Rs. 1,600

Question 27: The perimeter of triangle ABC is 23 cm . Find the area of triangle ABC



- (a) 22 cm^2
- (b) 33 cm^2
- (c) $\frac{33}{2} \text{ cm}^2$
- (d) $\frac{39}{2} \text{ cm}^2$

Question 28: There were 8,400 Adults in the district. Out of which 45% got vaccinated with COVISHIELD and 40% got vaccinated by COVAXIN. How many adults were not vaccinated?

- (a) 1,480
- (b) 1,260
- (c) 1,400
- (d) 1,280

Question 29: Which of the following will make a pythagorean triple with smallest number 14?

- (a) 14, 46, 50
- (b) 14, 50, 54
- (c) 14, 52, 58
- (d) 14, 48, 50

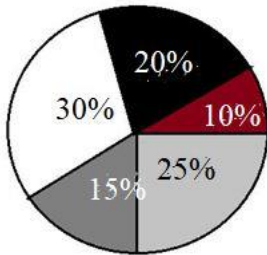
Question 30: What is the difference between simple interest and compound interest on a sum of Rs. 30,000 at the rate of 8% compounded annually?

- (a) Rs. 180
- (b) Rs. 182
- (c) Rs. 190
- (d) Rs. 192

Question 31: A Public Distribution Centre has provision of pulses for 150 families for 60 days. After 20 days 50 more families were allotted this Distribution Centre. How many more days the stock of pulses will last?

- (a) 30 days
- (b) 25 days
- (c) 20 days
- (d) 35 days

Question 32: Siya conducted a survey on colour of cars people has. 400 people participated in this survey. How many more people has white coloured car than black colored car?



How many more people has white coloured car than black coloured car?

- (a) 20 People
- (b) 30 people
- (c) 40 people
- (d) 50 people

Question 33: Sizes of four exterior angles of a pentagon are 75° , 83° , 64° and 90° . What is the value of missing angle?

- (a) 48°



- (b) 42°
- (c) 24°
- (d) 84°

Question 34: Solve: $\frac{x}{2} - \frac{1}{5} = \frac{x}{3} + \frac{1}{4}$

- (a) $x = \frac{27}{10}$
- (b) $x = \frac{15}{26}$
- (c) $x = \frac{23}{25}$
- (d) $x = \frac{29}{10}$

Question 35: The compound interest on a certain sum for 2 years at 10% per annum is Rs.525. Find the simple interest on the same sum for double the time at half the rate percent per annum.

- (a) Rs.300
- (b) Rs.800
- (c) Rs.700
- (d) Rs.500

Question 36: Regroup the term and factorise $z - 18 + 18xy - xyz$

- (a) $(1 - xy)(z - 18)$
- (b) $(1 + xy)(z - 18)$
- (c) $(1 - xy)(z + 18)$
- (d) $(1 + xy)(z + 18)$

Question 37: If $(x + 12)$ is a factor of $x^2 + 2x - 120$. Find the other factor?

- (a) $(x - 10)$
- (b) $(x - 12)$
- (c) $(x + 10)$
- (d) $(x - 20)$

Question 38: Find the selling price when:

CP = Rs. 1890 and gain% = 4%

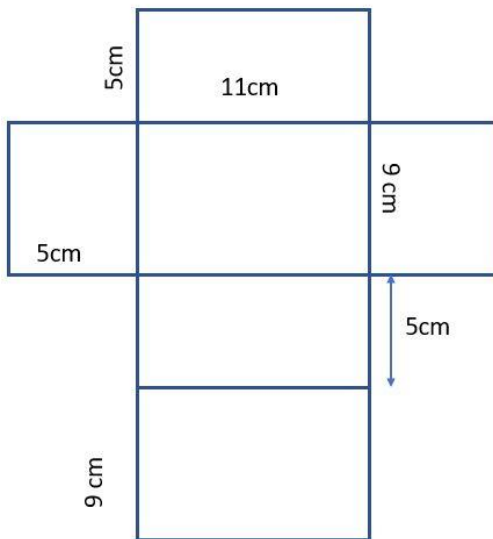
- a) Rs. 1,978.5
- b) Rs. 1,966.5
- c) Rs. 1,965.6
- d) Rs. 1,956.5

Question 39: Solve:

$$0.16(5x - 2) = 0.4x + 7$$

- a) 15.9
- b) 17.6
- c) 18.3
- d) 19.5

Question 40: Find the volume of the 3D shape



- (a) 495 cm^3
- (b) 295 cm^3
- (c) 495 cm^2
- (d) 275 cm^3

Section: Achiever section

Question 41: Anshika, Anshu and Kajal share some money

Kajal gets $\frac{2}{5}$ of the money.

Anshika and Anshu shared the rest of the money in ratio 4:3.

What is Anshu's share of money in fraction?

- (a) $\frac{9}{20}$
- (b) $\frac{6}{20}$
- (c) $\frac{9}{35}$
- (d) $\frac{6}{35}$

Question 42: Car A travelled with the speed of 40 km/hr for half an hour, Car B travelled with speed of 60 km/hr for 45 minutes. What is the average speed of Car A and Car B?

- (a) 50 km/hr
- (b) 52 km/hr
- (c) 54 km/hr
- (d) 56 km/hr

Question 43: Ramesh lent out Rs 9000 for 4 years at 16% per annum and borrowed Rs 5000 for 2 years at 11% per annum. How much did he gain or lose?

- (a) Gain Rs. 5,760
- (b) Lose Rs. 3,750
- (c) Gain Rs. 4,660
- (d) Lose Rs. 3,650

Question 44: What are the factors of $81x^4 - y^4$?

- (a) $(9x^2 - y^2)(3x + y)(3x - y)$
- (b) $(9x^2 + y^2)(3x + y)(3x - y)$
- (c) $(9x^2 + y^2)(3x + y)^2$
- (d) $(9x^2 + y^2)(3x - y)^2$

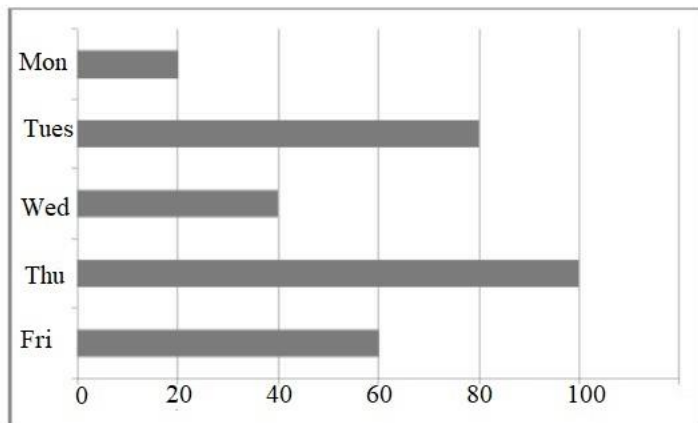
Question 45: Shaw borrowed Rs.15, 000 from a bank to buy car at 10% simple interest. If he paid Rs.9, 000 as interest while clearing the loan, find the time for which the loan was given.

- (a) 6 years
- (b) 6.5 years
- (c) 7 years
- (d) 7.5 years

Question 46: Which of the following statements are **True**?

- (a) Rational numbers are not closed under addition
- (b) Rational numbers are not closed under subtraction
- (c) Rational numbers are not closed under multiplication
- (d) Rational numbers are not closed under division

Question 47: The bar chart shows the number of people purchased a newly launched book in its first week



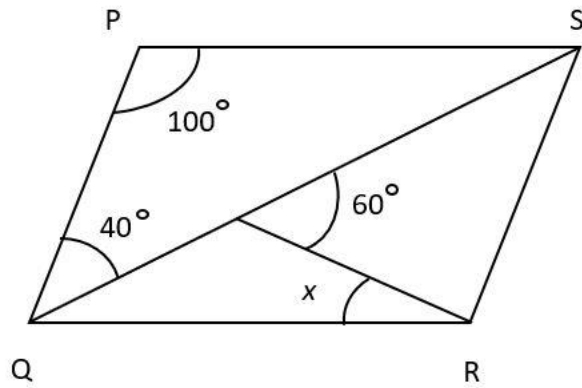
If this information was represented on a pie chart, What angle would be required for Thursday?

- (a) 100°
- (b) 120°
- (c) 80°
- (d) 140°

Question 48: A rectangle was formed by joining two squares. The ratio of area of rectangle formed to the area of square is

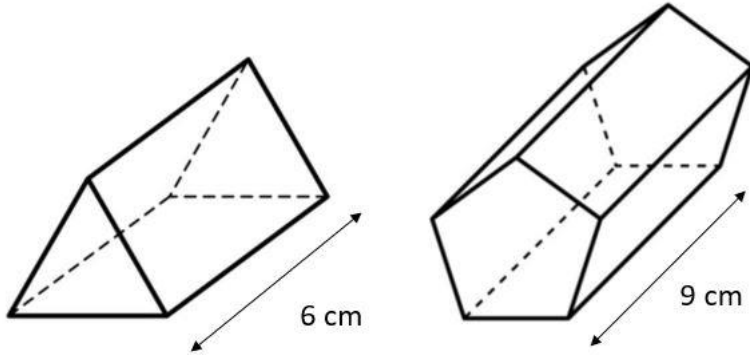
- (a) 1:2
- (b) 1:3
- (c) 2:1
- (d) 3:1

Question 49: ABCD is a parallelogram. The value of angle x is?



- (a) 22°
- (b) 21°
- (c) 20°
- (d) 19°

Question 50: The ratio between area of triangular face and pentagonal face of the below images is 2:3. The ratio between the volume of triangular prism and pentagonal prism is



- (a) 9:4
- (b) 4:9
- (c) 2:3
- (d) 3:2

Answers:

- 1. (c)
- 2. (d)
- 3. (b)
- 4. (d)
- 5. (b)
- 6. (c)
- 7. (b)
- 8. (c)



9. (b)
10. (c)
11. (b)
12. (a)
13. (d)
14. (d)
15. (b)
16. (d)
17. (a)
18. (c)
19. (b)
20. (c)
21. (b)
22. (c)
23. (c)
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40. (a)
41. (c)
42. (b)
43. (c)
44. (b)
45. (a)
46. (d)
47. (b)
48. (c)



49. (c)

50. (b)