SIMS
(SCHOLARS INTEGRAL MATHS & SCIENCE OLYMPIADS)

CLASS VI

SIMO QUESTION PAPER

MAX. MARKS : 100   TIME: 60 MIN.

NAME OF THE STUDENT : ....

HALL TICKET NUMBER : ....

NAME OF THE SCHOOL : ....

INSTRUCTIONS:

✦ **This question paper contains 41 questions.**

✦ **First 32 questions (1 to 32) are single correct answer type. Each question carries 2 marks.**

✦ **Next 9 questions (33 to 41) questions are one or more than one correct answer type. Each question carries 4 marks.**

✦ **No negative marks.**

✦ **You have not allowed to use a calculator or any other electronic devices in the examination hall.**

✦ **Read the instructions given in the answer sheet(OMR sheet) before answering the questions.**

✦ **The answer sheet should be returned to the invigilator before leaving the examination hall (You can retain the question paper with you)**

✦ **Results will be available at : www.simsolympiads.com**

Single Correct Answer Type: 32 × 2 = 64

1. **The number of distinct prime factors of the largest 4-digit number is**

   1) 2   2) 3   3) 5   4) 11

2. **If a bicycle wheel has 48 spokes, then the angle between a pair of two consecutive spokes is**

   1) $\left(5\dfrac{1}{2}\right)^{\text{o}}$ 2) $\left(7\dfrac{1}{2}\right)^{\text{o}}$ 3) $\left(\dfrac{2}{11}\right)^{\text{o}}$ 4) $\left(\dfrac{2}{15}\right)^{\text{o}}$

3. **Which of these is the greatest number ?**

   1) 38926 ones   2) 4905 tens

   3) 3450 hundreds   4) 210 thousands

4. **Which of the following numbers exceeds 9999999 by 1?**

   1) 10000   2) 9999998   3) 10000000 4) 1000000

5. **Find the value of x.** $14\dfrac{3}{4} \times 4\dfrac{1}{2} - 3\dfrac{1}{4} \times 4\dfrac{1}{2} + 11\dfrac{1}{2} \times 5\dfrac{1}{2} = x - 4$

   1) $32\dfrac{3}{8}$ 2) 111   3) 115   4) 119

6. **Maya has the equal number of 20 paise and 50 paise coins. The total value of the coins is ₹16.10. If she spent five 50 paise coins, how many 50 paise coins did she have left ?**

   1) 18   2) 23   3) 28   4) 46

7. **Find the perimeter of a rectangle with a length of 12 cm and a width of 14 cm.**

   1) 52 cm   2) 43 cm   3) 75 cm   4) 68 cm

8. **The number of terms in the expression $3x^2y - 2y^2z - z^2x + 5$ is**

   1) 2   2) 3   3) 4   4) 5

9. **Which of the following is a pair of like terms ?**
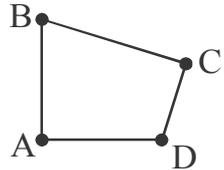
1) $-7xy^2z, -7x^2yz$ 2) $-10xyz^2, 3xyz^2$

3) $3xyz, 3x^2y^2z^2$ 4) $4xyz^2, 4x^2yz$

10. **The expression for the number of diagonals that we can make from one vertex of 'n' sided polygon is:**

1) $2n+1$ 2) $n-2$ 3) $5n+2$ 4) $n-3$

11. **In the given figure, ABCD is a quadrilateral. How many pairs of opposite angles are there ?**

1) One; $(\angle A, \angle D)$

2) Two; $(\angle A, \angle C), (\angle B, \angle D)$

3) Three; $(\angle A, \angle C), (\angle B, \angle D), (\angle A, \angle D)$

4) Four; $(\angle A, \angle B, \angle C, \angle D)$

12. **The angles of a quadrilateral are in the ratio 3 : 5 : 7 : 9. Find the measure of each of these angles respectively.**

1) $45^0, 75^0, 135^0, 105^0$ 2) $105^0, 75^0, 45^0, 135^0$

3) $135^0, 105^0, 75^0, 45^0$ 4) $45^0, 75^0, 105^0, 135^0$

13. **The value of the variable in the equation $\dfrac{x+1}{2} + \dfrac{x-2}{3} = 9$ is _____ .**

1) 2   2) 12   3) 11   4) 15

14. **The sum of $999\dfrac{1}{7} + 999\dfrac{2}{7} + 999\dfrac{3}{7} + 999\dfrac{4}{7} + 999\dfrac{5}{7} + 999\dfrac{6}{7}$ is**

1) 1000   2) 6000   3) 5997   4) 1002
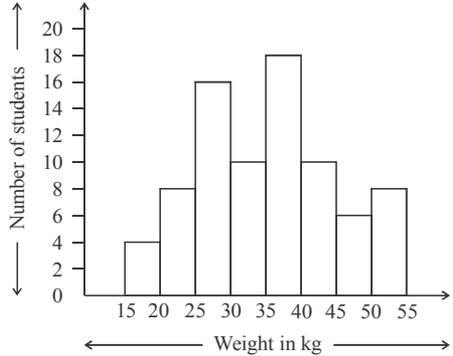
15. **A kite has _____ lines of symmetry.**

1) 1   2) 2   3) 3   4) 0

16. **The L.C.M of the fractions** $\dfrac{5}{16}, \dfrac{15}{24}$ **and** $\dfrac{25}{8}$ **is**

    1) $\dfrac{5}{48}$ 2) $\dfrac{5}{8}$ 3) $\dfrac{75}{48}$ 4) $\dfrac{75}{8}$

17. **Given below is the bar graph showing weight (in kg) of the students of VI class in a school. How many students weight less than 35 kg ?**

    1) 38

    2) 24

    3) 16

    4) 18

18. **A basket is full of fruits mangoes, oranges and apples. If 60% are mangoes, 10% are oranges then what is the percentage of apples.**

    1) 70%   2) 30%   3) 50%   4) 25%

19. **The difference in the measure of two complementary angles is 12°. Find the measure of angles.**

    1) 39°, 51   2) 36°, 54°   3) 84°, 96°   4) 78°, 12°

20. **Find the value of the x in the figure .**

    1) x = 100°

    2) x = 80°

    3) x = 70°

    4) x = 85°
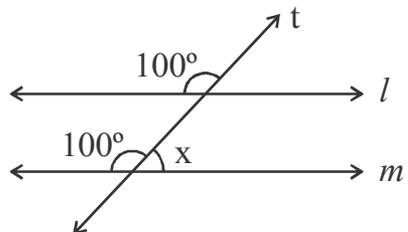
21. **From integer puzzle, the value of A is**

1) –7

2) 7

3) –1

4) 4
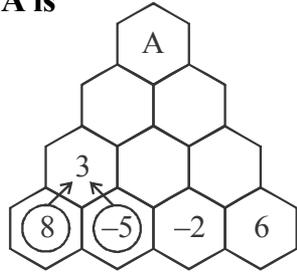
22. **Which of the following statements are CORRECT ?**

1) $-59 \div (-1) = -59$ 2) $(-25) \div 0 = 0$

3) $(-54) \div (-9) = -6$ 4) $19 \div (-1) = -19$

23. **The exterior angle of a triangle is 75°. The sum opposite of interior angles can be**

1) 45°, 30⁰   2) 25°, 60°   3) 44°, 32°   4) None

24. **The greatest number which always divides the product of the predecessor and successor of an odd natural number other than 1, is**

1) 6   2) 4   3) 16   4) 8

25. **Which figure has no line of symmetry ?**

1) A circle   2) A scalene triangle

3) An isosceles   4) An equilateral triangle

26. **A man travels 230 km in 6 hours in which he took break for an hour. How much distance he will cover if he travels for 8 hours non stop.**
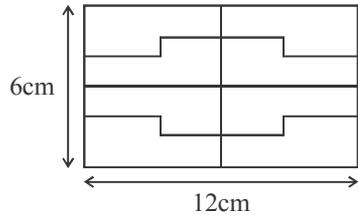
1) 307 km   2) 360 km   3) 336 km   4) 368 km

27. **Find the missing number in the series: 7, 15, 31, 63, ____.**

1) 124   2) 125   3) 127   4) 131

28. **Following rectangle is composed of 8 congruent parts. Area of each part is**

1) 72 cm²   2) 36 cm²

3) 18 cm²   4) 9 cm²

6cm

12cm

29. **Tency had seven tenth of the pizza and her younger brother had two tenth of pizza. How much pizza still left ?**

1) $\dfrac{1}{5}$ 2) $\dfrac{3}{5}$ 3) $\dfrac{1}{10}$ 4) $\dfrac{4}{10}$

30. **Two numbers are in the ratio 7 : 9. If the sum of the numbers is 112, then the larger number is:**

1) 49   2) 72   3) 63   4) 42

31. **If two angles are classified as supplementary angles then their sum must be equal to**

1) 120°   2) 90°   3) 180°   4) 360°

32. **Which shape has 8 sides ?**

1) Pentagon   2) Octagon   3) Hexagon   4) Septagon

One or more Correct Answer Type: **9 × 4 = 36**

33. **In the figure, the measure of angles a, b, c, and d are**

1) a = 55°

2) b = 57°

3) c = 67°
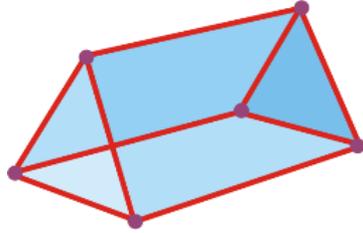
4) d = 68°
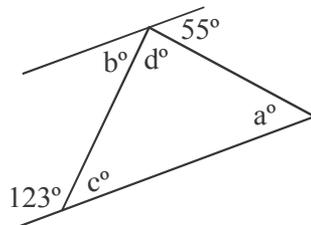
34. **The following numbers which are divisible by 8 and lie between 100 to 200.**
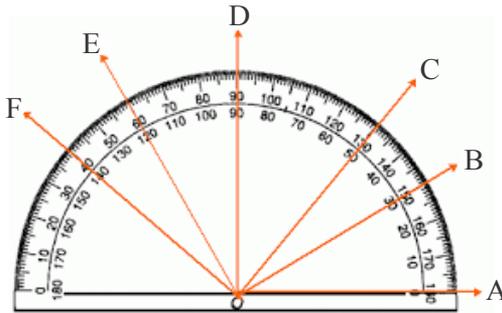
1) 126   2) 176   3) 192   4) 184

35. **How many faces, edges, and vertices does the solid shown here have ?**

1) 5 faces

2) 10 edges

3) 9 edges

4) 6 vertices

36. **Find the measure of the angles in a protractor.**

1) $\angle AOC = 50^\circ$ 2) $\angle COF = 90^\circ$

3) $\angle AOE = 60^\circ$ 4) $\angle BOD = 60^\circ$

37. **A rectangular sandbox has a width of 10 cm. The sandbox is 4 times as long as it is wide. What are the perimeter(P) and area(A) of the sandbox ?**

1) P = 56 cm   2) P = 100 cm

3) A = 140 cm²   4) A = 400 cm²

38. Calculate the xº and yº.

1) x = 35º

2) y = 135º

3) y = 145º

4) x = 55º

145º

xº

yº
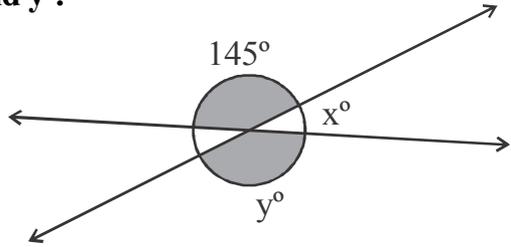
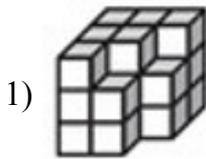**39. Which of the following set of numbers are in proportion?**
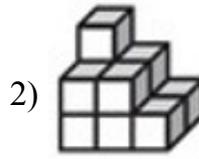
1) 9, 3, 15, 5
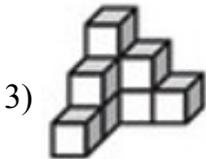
2) 4, 7, 6, 5

3) 5, 6, 8, 9

4) 4, 3, 8, 6

40. Which option is correct relation to the number of cubes in the figure ?

1)

Cubes = 22
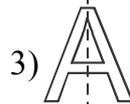
2)

Cubes = 11

3)

Cubes = 7

4)

Cubes = 15

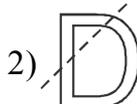**41. Which of the following dotted lines represent line of symmetry ?**

1) B   2) D   3) A   4) N

*** ALL THE BEST ***