THE LAWRENCE SCHOOL

SANAWAR

Syllabus for Class VI Entrance Examination: MATHEMATICS

SHAPES & SPATIAL UNDERSTANDING

Gets the feel of perspective while drawing a 3-D object in 2-D. Gets the feel of an angle through observation and paper folding. Identifies right angles in the environment. Classifies angles into right, acute and obtuse angles. Represents right angle, acute angle and obtuse angle by drawing and tracing. Explores intuitively rotations and reflections of familiar 2-D shapes. Explores intuitively symmetry in familiar 3-D shapes. Makes the shapes of cubes, cylinders and cones using nets especially designed for this purpose.

Numbers

NUMBERS AND OPERATIONS

Finds place value in numbers beyond 1000. Appreciates the role of place value in addition, subtraction and multiplication algorithms. Uses informal and standard division algorithms. Explains the meaning of factors and multiples.

FRACTIONAL NUMBERS

Finds the fractional part of a collection. Compares fractions. Identifies equivalent fractions. Estimates the degree of closeness of a fraction to known fractions. Uses decimal fractions in the context of units of length and money. Expresses a given fraction in decimal notation and vice versa.

Money

Applies the four operations in solving problems involving money.

Measurement

LENGTH

Determines area and perimeter of simple geometrical figures. Applies the four operations in solving problems involving length, weight and volume. Relates commonly used larger and smaller units of length, weight and volume and converts one to the other. Applies simple fractions to quantities. Converts fractional larger unit into complete smaller units. Appreciates volume of a solid body: intuitively and also by informal measurement. Uses addition and subtraction in finding time intervals in simple cases.

Data Handling

Collects two-dimensional quantitative data. represents the data in the form of a table. Draws a bar graph or a pictograph to present a data.

Patterns

Identifies patterns in square numbers, triangular numbers. Relates sequences of odd numbers between consecutive square numbers. Makes border strip and tiling patterns.

SAMPLE QUESTION PAPER

Class VI

MATHEMATICS

Time: 01 Hour   **Max Marks: 100**

General Instructions:

1) Answer all the questions on this sheet only.

2) No separate sheet will be provided for rough work.

3) Write neatly and briefly.

4) Question 1 to 16 carries 5 marks each.

5) Question 17 to 18 carries 10 marks each.

Q1. Write the Roman Numerals for the following:

   a) 49 =

   b) 89 =

   c) 51 =

   d) 97 =

Q2. The cost of a cooler is Rs.5296 & the cost of a computer is Rs.25050 more than the cost of the cooler. Find (i) the cost of the computer & (ii) the cost of computer & cooler.

Q3.   (i) Find the prime factors of: 96

           (ii) Find the HCF for: 72 & 48.

Q4. Arrange the following fractions in the ascending order:

$$\frac{4}{6}, \quad \frac{3}{8}, \quad \frac{6}{12}$$

Q5. Find the sum of:

$$\frac{7}{18} + \frac{5}{6} + \frac{11}{12}$$

Q6. Write each of the following as decimals:

(a) Forty six & five tenths   =

(b) Nineteen & nineteen hundredths   =

(c) Thirty point two   =

(d) Eight thousandths   =

(e) Two hundred nine & six hundredths   =

Q7. Find the product of:

(a) 3.76×10 =

(b) 35.8×100 =

(c) 0.1×1000 =

(d) 0.79×1000 =

(e) 0.505×100 =

Q8. Find the quotient when 804 is divided by 4.02.

Q9. Convert into the required units:

(a) 4250 *ml* into *l*.

(b) 9505 mm into m.

Q10. Find the duration of time:

(a) from 7:30 am to 12 noon =

(b) from 2:15 pm to 10:10 pm =

Q11. A shopkeeper earns a profit of Rs75 on each sewing machine. If the C.P of a machine is Rs.2018.50. What is its S.P?

Q12. Draw the following:

a) A line.

b) A circle.

Q13. Classify each of the following as acute, obtuse or right angle:

(a)   138° =

(b)   76°   =

(c)   90°   =

(d)   93°   =

14. Draw a line segment AB of length 5 cm. With the help of a protractor draw angles of 55° & 155° at A and B as vertices & line segment AB as one of the sides.

Q15. Draw a triangle & name it. Also write the names of the sides & vertices of the triangle.

Q16. Draw a line segment PQ of length 6 cm. Take P as centre & radius 3 cm and draw a circle. With Q as centre & radius 3 cm draw another circle.

Q17. Find the perimeter & area of the rectangle with length 5 cm & breadth 1 cm. Also find the area & perimeter of the rectangle with length 4 cm & breadth 2 cm .
(a) Are the two perimeters equal?
(b) Are the two areas equal?

Q18. A cuboid is 6 cm long , 3 cm broad & 3 cm high & a cube has an edge of 6 cm. Which one has greater volume & by how much?