

SAINIK SCHOOL AMBIKAPUR
CHHATTISGARH
WINTER VACATION HOMEWORK (2022-23)

Class : VIII

Subject : Mathematics

Class	Subject	Teacher
Ser	Items	Details
1.	Syllabus for PT – II	Chapter 9 : Algebraic Expressions Chapter 10 : Visualising Solid Shapes Chapter 11 : Mensuration Chapter 12 : Exponents and Powers
2.	Revision Homework / Assignment	<ol style="list-style-type: none"> The parallel sides of a trapezium measure 12 cm and 20 cm. Calculate its area if the distance between the parallel lines is 15 cm. Calculate the height of a cuboid which has a base area of 180 cm^2 and volume is 900 cm^3. A square and a rectangle have the same perimeter. Calculate the area of the rectangle if the side of the square is 60 cm and the length of the rectangle is 80 cm. From a circular sheet of radius 4 cm, a circle of radius 3 cm is cut out. Calculate the area of the remaining sheet after the smaller circle is removed. A cuboidal box of dimensions $1 \text{ m} \times 2 \text{ m} \times 1.5 \text{ m}$ is to be painted except its bottom. Calculate how much area of the box has to be painted. Simplify the following expressions: <ol style="list-style-type: none"> $(x + y + z)(x + y - z)$ $x^2(x - 3y^2) - xy(y^2 - 2xy) - x(y^3 - 5x^2)$ $2x^2(x + 2) - 3x(x^2 - 3) - 5x(x + 5)$ Verify that $(11pq + 4q)^2 - (11pq - 4q)^2 = 176pq^2$ Find the value of k if $(-2)^{k+1} \times (-2)^3 = (-2)^7$
3.	Subject Capacity Building Assignment	<p>Activity 1: To verify, by paper cutting and pasting, that if two parallel lines are intersected by a transversal, then –</p> <ol style="list-style-type: none"> each pair of corresponding angles are equal each pair of alternate interior angles are equal Each pair of interior angles on the same side of the transversal is supplementary. <p>Activity 2: To explore the relationship between -</p> <ol style="list-style-type: none"> Length (in cm) and perimeter (in cm) Length (in cm) and area (in cm) of 5 squares of different dimensions drawn on a squared paper. <p>Activity 3: To make cuboids and cubes of given dimensions ($4 \times 3 \times 2$, $3 \times 3 \times 3$) using unit Cubes and to calculate the volume of each.</p> <p>Activity 4: To derive the formula for total surface area of a cuboid.</p>
4.	Preparatory Work for Units / Chapters to be covered after PT-II	Do Exercise 12.2 and 12.3 of Class VI NCERT text book