

*Class – 7, chapter-6, handout -2*

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*Exterior angle property and angle sum property in a triangle:-*

- *Exterior angle of a triangle:- When a side of a triangle is extended in one direction , the angle thus formed is called exterior angle.*
- *It is adjacent to the interior angle of the triangle at that particular vertex.*
- *An exterior angle of a triangle is equal to the sum of its interior opposite angles.*
- *Angle sum property of a triangle-In a triangle, the sum of all three interior angles is always equal to  $180^\circ$ .*
- *In the triangle ABC, the sum of all three angles  $a^\circ + b^\circ + c^\circ = 180^\circ$ .*
- *In other words,  $m\angle A + m\angle B + m\angle C = 180^\circ$ .*
- *Statement:- The total measure of the three angles of a triangle is  $180^\circ$ .*
- *Special type of triangles:- Isosceles triangles:-*
- *It is a special type of triangle in which two sides are equal.*
- *The angles opposite to equal sides are also equal.*
- *Two equal angles are called base angles.*
- *The third angle is called vertex angle.*
- *Equilateral triangle:- It is a special type of triangle.*
- *The three sides of this triangle are equal.*

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- *The three angles of this triangle are always equal and equal to  $60^\circ$ .*