

7th – Lines and Angles II

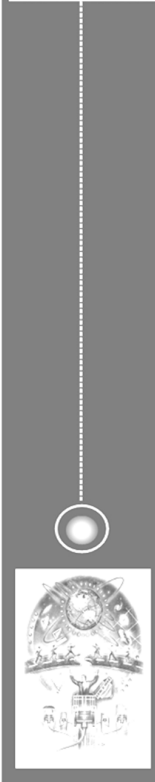
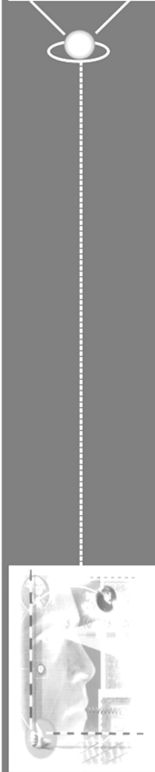


1. **Parallel Lines.** Lines on a plane that never meet. They are always the same distance apart
2. **Transversal:** A line which cuts two or more given lines at different points is called a transversal.
3. **Exterior Angles:** The angles whose arms do not contain the segment on the transversal cut by the given lines are called **Exterior Angles**.
4. **Interior Angles:** The angles whose one of the arms contains the segment on the transversal cut by the given lines are called **Interior Angles**.
5. **Corresponding Angles:** A pair of angles in which one arm of both the angles of the pair is on the same side of the transversal and the other arms are directed in the same sense is called a pair of **corresponding angles**.
6. **Alternate Interior Angles:** These angles are formed when two lines are cut by a transversal, the pairs of angles on either side of the transversal and inside the two lines.
7. **Alternate Exterior Angles:** A pair of angles in which one arm of each of the angles is on the opposite sides of the transversal and whose other arm is directed in opposite sense and does not include the segment is called a pair of **alternate exterior angles**.

1.	In adjoining figure $l \parallel m$ is cut by the transversal t . If $\angle 1 = 70$, find the measure of $\angle 3, \angle 5, \angle 6$.	
2.	If the lines m and n are parallel to each other, then determine the angles $\angle 5$ and $\angle 7$.	
3.	If $\angle A = 120^\circ$ and $\angle H = 60^\circ$. Determine if the lines are parallel.	
4.	Find the value of x and y in following figure.	



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<p>5. In the following figure $l \parallel m$, $n \parallel p$ and $\angle 1 = 85^\circ$. Find $\angle 2$ and $\angle 3$.</p>	
<p>6. Identify each pair of angle. (a) $\angle 2, \angle 4$ (b) $\angle 1, \angle 8$ (c) $\angle 4, \angle 5$ (d) $\angle 3, \angle 6$ (e) $\angle 5, \angle 7$ (f) $\angle 5, \angle 8$</p>	
<p>7. In Figure, AB and CD are parallel lines intersected by a transversal PQ at L and M respectively, If $\angle CMQ = 60^\circ$, find all other angles in the figure.</p>	
<p>8. In Figure, $l \parallel m$. Find the values of a, b, c, d. Give reasons.</p>	
<p>9. In Figure, if $l \parallel m \parallel n$ and $\angle 1 = 60^\circ$, find $\angle 2$.</p>	
<p>10. In the adjoining figure, name the following pairs of angles: (i) Obtuse vertically opposite angle. (ii) Adjacent complement angles. (iii) Equal supplementary angles. (iv) Unequal supplementary angles. (v) Adjacent angles that do not form a linear pair.</p>	