

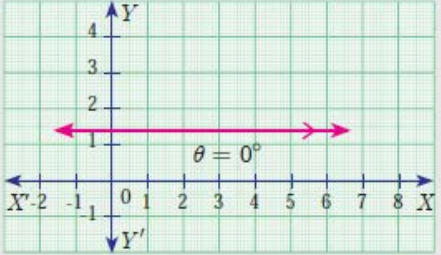
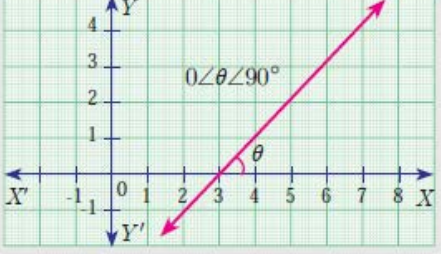
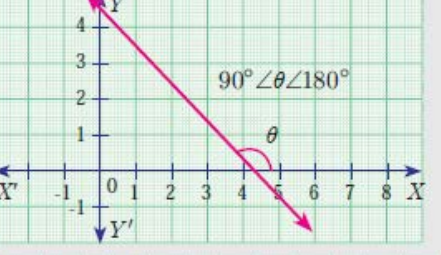
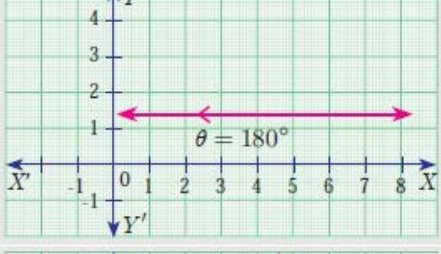
Slope of a Straight line:

If θ is the angle of inclination of a non-vertical straight line, then $\tan \theta$ is called the slope or gradient of the line and is denoted by m .

Therefore the slope of the straight line is $m = \tan \theta$, $0 \leq \theta \leq 180^\circ$, $\theta \neq 90^\circ$.

$$\text{Slope } m = \frac{\text{change in } y \text{ coordinates}}{\text{change in } x \text{ coordinates}}$$

Values of slopes :-

S. No.	Condition	Slope	Diagram
(i)	$\theta = 0^\circ$	The line is parallel to the positive direction of X axis.	
(ii)	$0 < \theta < 90^\circ$	The line has positive slope (A line with positive slope rises from left to right).	
(iii)	$90^\circ < \theta < 180^\circ$	The line has negative slope (A line with negative slope falls from left to right).	
(iv)	$\theta = 180^\circ$	The line is parallel to the negative direction of X axis.	
(v)	$\theta = 90^\circ$	The slope is undefined.	