



Q3. What do you understand by 'parametric shift of a line'? How does a line shift when its:

- (i) slope decreases, and
- (ii) its intercept increases?

Ans: Considering the equation of a straight line as

$$b = ma + \varepsilon$$

Where  $m$  = slope of straight line,  $m > 0$

$\varepsilon$  = intercept on vertical axis,  $\varepsilon > 0$

Also, when  $a$  increases by 1 unit, the value of  $b$  increases by  $m$  units.

The parameters  $\varepsilon$  and  $m$  are parameters of a graph.

As the value of  $m$  increases, the straight line rotates upward around the same vertical intercept. This movement is an example of parametric shift of the graph.

- (i) A straight line rotates downward around the same vertical intercept as its slope decreases.
- (ii) A straight line shifts parallelly upward when its intercept increases.

\*\*\*\*\* END \*\*\*\*\*