

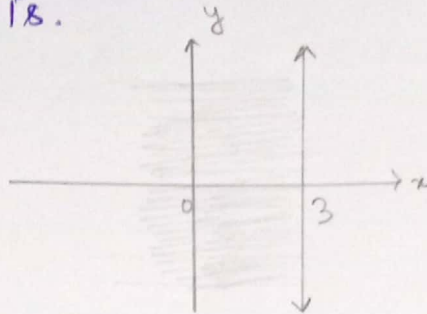
2. STATE WHETHER T or F:

(i) If $x < y$ and $b < 0$, then $\frac{x}{b} < \frac{y}{b}$

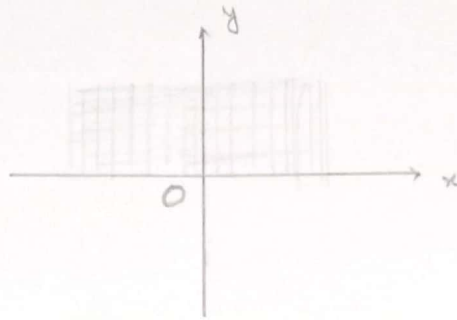
(ii) If $xy > 0$, then $x > 0$ and $y < 0$

(iii) If $|x| < 5$, then $x \in (-5, 5]$

(iv) Graph of $x < 3$ is.



(v) Graph of $y \leq 0$ is



Sol. (i) F, because both sides of inequality are divided by negative no. direction of inequality should be reversed.

(ii) F, because if the numbers are of opposite sign then their product is always negative.

(iii) F, because according to formula $|x| < a \Rightarrow -a < x < a$
 $\Rightarrow x \in (-a, a)$

(iv) F, because the line $x=3$ is represented by a solid line instead of dashed line.

(v) F, because in the first and second quadrant $y \geq 0$