
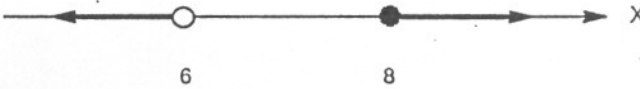


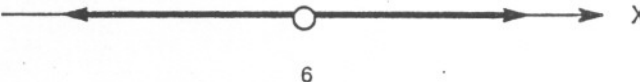
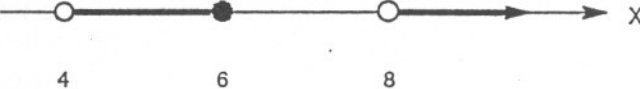


VARIOUS NOTATIONS AND DESCRIPTIONS

Graph	Set Notation	Verbal Description	Interval Notation
	$\{x \mid 6 \leq x < 8\}$	$x \geq 6$ and $x < 8$	$[6, 8)$
	$\{x \mid x < 6 \text{ or } x \geq 8\}$	$x < 6$ or $x \geq 8$	$(-\infty, 6) \cup [8, \infty)$
	$\{x \mid x \in \mathbb{R}\}$	x is any real number	$(-\infty, \infty)$
	$x \in \phi$	There is no possible value for x	ϕ
	$\{x \mid x \in \mathbb{R} \text{ and } x \neq 6\}$	x is any real except $x \neq 6$	$(-\infty, 6) \cup (6, \infty)$
	$\{x \mid 4 < x \leq 6 \text{ or } x > 8\}$	$(x > 4 \text{ and } x \leq 6)$ or $(x > 8)$	$(4, 6] \cup (8, \infty)$

Notes

1. In interval notation, use parenthesis with $-\infty$ or ∞ .
2. A statement such as " $6 > x > 8$ " is false since x cannot be less than 6 and also greater than 8.
3. A statement such as " $6 < x > 8$ " is meaningless.
4. A continuous inequality, such as " $6 < x < 8$ " can be read as " x is between 6 and 8".
5. A disconnected graph, such as the last one shown above, must be expressed using "U" or "or".

