

Set

Roster notation

Inequalities

< less than

 \leq less than or equal to

> Greater than

 \geq greater than or equal to \neq not equal

Open vs. Closed

 $\left\{ \begin{array}{l} < \\ > \\ \neq \end{array} \right.$ $\left\{ \begin{array}{l} \leq \\ \geq \\ = \end{array} \right.$

Set Builder notation

Interval notation

Empty set or null set

Multiply or dividing the entire inequality by a negative

Examples

Given $A = \{a, b, d, m\}$ and $B = \{b, c, m, n\}$, find $A \cup B$ and $A \cap B$ Given $A = \{1, 2, 3, 4\}$ and $B = \{b, c, m, n\}$, find $A \cup B$ and $A \cap B$

$(3, \infty)$

$(-\infty, 5]$

$[8, 9)$

$$6x + 4 \geq 22$$

$$-2x + 3 > 4x - 5$$

$$\frac{1}{5}x - \frac{2}{3} \leq \frac{3}{10}x + \frac{5}{6}$$

$$8 + 3(5x - 7) < 9 - [4 - 6(2 - x)]$$