

Properties of Inequalities

If $a < b$ then $a + c < b + c$ and $a - c < b - c$

If $a < b$ and $c > 0$ then $ac < bc$ and $\frac{a}{c} < \frac{b}{c}$

If $a < b$ and $c < 0$ then $ac > bc$ and $\frac{a}{c} > \frac{b}{c}$



Key Point

- $>$ is greater than
- \geq is greater than or equal to
- $<$ is less than
- \leq is less than or equal to



Key Point

When solving an inequality:

- you can add the same quantity to each side
- you can subtract the same quantity from each side
- you can multiply or divide each side by the same **positive** quantity

If you multiply or divide each side by a negative quantity, the inequality symbol must be reversed.