

Multiplication Property of Inequality

Words When you multiply each side of an inequality by the same *positive* number, the inequality remains true.

Numbers $8 > 6$

$$8 \times 2 > 6 \times 2$$

$$16 > 12$$

Algebra $\frac{x}{4} < 2$

$$\frac{x}{4} \cdot 4 < 2 \cdot 4$$

$$x < 8$$

Division Property of Inequality

Words When you divide each side of an inequality by the same *positive* number, the inequality remains true.

Numbers $8 > 6$

$$8 \div 2 > 6 \div 2$$

$$4 > 3$$

Algebra $4x < 8$

$$\frac{4x}{4} < \frac{8}{4}$$

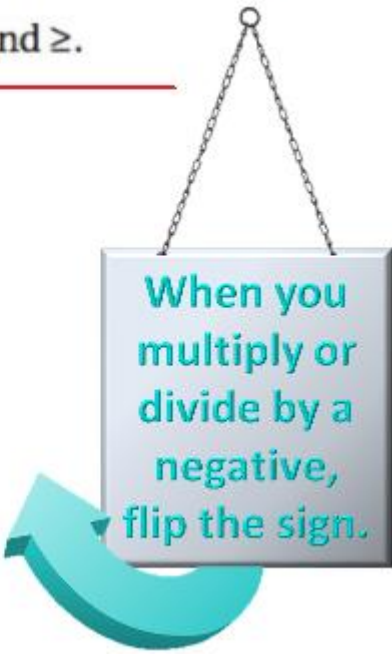
$$x < 2$$

These properties are also true for \leq and \geq .

When you multiply or divide by a negative number, the sign switches to the opposite direction.

$$\frac{-2x}{-2} > \frac{6}{-2}$$

$$x < -3$$



When you multiply or divide by a negative, flip the sign.