

Graph & solve a
compound
inequality with

AND

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OR

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Example 1: Translate the verbal phrase into an inequality. Then graph the inequality.

All real numbers that are greater than or equal to -1 and less than 2.



Example 2: Solve the inequality. Graph your solution.

$$-5 \geq y - 8 \geq -7$$



Example 3: Translate the verbal phrase into an inequality. Then graph the inequality.

All real numbers that are less than -4 or greater than -1.



Example 4: Solve the inequality. Graph your solution.

$$3h + 1 \leq -5 \text{ or } 2h - 5 > 7$$



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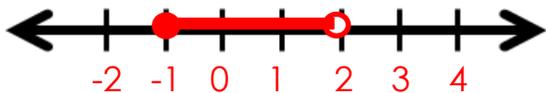
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Example 1: Translate the verbal phrase into an inequality. Then graph the inequality.

All real numbers that are greater than or equal to -1 and less than 2.

$$x \geq -1 \text{ and } x < 2$$



Example 2: Solve the inequality. Graph your solution.

$$-5 \geq y - 8 \geq -7$$

$$\begin{array}{r} -5 \geq y - 8 \\ +8 \quad +8 \\ \hline 3 \geq y \\ y \leq 3 \end{array}$$

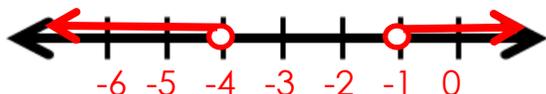
$$\begin{array}{r} y - 8 \geq -7 \\ +8 \quad +8 \\ \hline y \geq 1 \end{array}$$



Example 3: Translate the verbal phrase into an inequality. Then graph the inequality.

All real numbers that are less than -4 or greater than -1.

$$x < -4 \text{ or } x > -1$$



Example 4: Solve the inequality. Graph your solution.

$$3h + 1 \leq -5 \text{ or } 2h - 5 > 7$$

$$\begin{array}{r} 3h + 1 \leq -5 \\ -1 \quad -1 \\ \hline 3h \leq -6 \\ \frac{3h}{3} \leq \frac{-6}{3} \\ h \leq -2 \end{array}$$

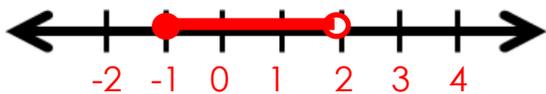
$$\begin{array}{r} 2h - 5 > 7 \\ +5 \quad +5 \\ \hline 2h > 12 \\ \frac{2h}{2} > \frac{12}{2} \\ h > 6 \end{array}$$



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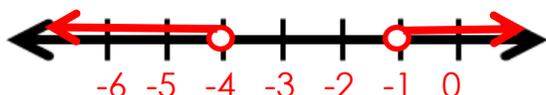
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