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# Solving One-Step Inequalities by Multiplying or Dividing

<p>x #throws at the target</p> $-\frac{1}{2}x \leq -11$ <p><math>\times (-2)</math>      <math>\times (-2)</math></p>	
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- 1 Define the meaning of each inequality sign.
- 2 Explain the rules of the cavemen's game.
- 3 Calculate the number of times at least the first cavemen hit the bullseye.
- 4 Analyze the scores of the cavemen's friends.
- 5 Decide which sign has to be flipped to solve the inequality.
- 6 Calculate the inequality  $-2x - 2 \geq (-2x + 1) \times 4$
- + with lots of tips, answer keys, and detailed answer explanations for all of the problems.



The complete package, including all problems, hints, answers, and detailed answer explanations is available for all [sofatutor.com](https://www.sofatutor.com) subscribers.



## Define the meaning of each inequality sign.

Match each sign with its meaning.

$x$  greater/eq. to  $y$

$x$  less than  $y$

$x$  greater than  $y$

$x$  less or equal to  $y$

$$x \leq y$$

$$x > y$$

$$x \geq y$$

$$x < y$$

..... 1

..... 2

..... 3

..... 4



## Hints for solving these problems

1  
of 6

### Define the meaning of each inequality sign.

#### Hint #1

Which inequality sign makes a true statement?

- $-2 < 5$
  - $-2 > 5$
  - $-2 \leq 5$
  - $-2 \geq 5$
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#### Hint #2

When we introduce variables, we get even bigger solution sets.

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#### Hint #3

Which numbers fulfill the inequality  $x \leq 5$ ?

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## Answers and detailed answer explanations for these problems

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of 6

### Define the meaning of each inequality sign.

**Answer key:** 1:  $x$  less or equal to  $y$  // 2:  $x$  greater than  $y$  // 3:  $x$  greater/eq. to  $y$  // 4:  $x$  less than  $y$

There are four inequality signs:

- $x < y$  meaning  $x$  **less than**  $y$
- $x > y$  meaning  $x$  **greater than**  $y$
- $x \leq y$  meaning  $x$  **less or equal to**  $y$
- $x \geq y$  meaning  $x$  **greater or equal to**  $y$

Solving inequality problems requires a little more attention than solving equations because when you multiply or divide by a negative number, you must flip the inequality sign.