Ch 4.1 and 4.2 One Step Inequalities

Symbols:

$>$ $\leq$ $<$ $\geq$

Greater Than:

Greater Than or equal to:

Less Than or eqal to:

Lesss Than:

Apr 16-8:52 AM

Shaded region represents a solution to the inequality.

$>$ and $<$: ***Open*** circle because the number is ***not*** part of the solution.

$\geq$ and $\leq$: ***Closed*** circle because the number ***is*** part of the solution.

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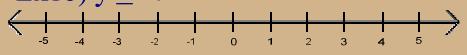
If you put your letters on the left, the arrow will tell you the direction to shade.

Ex 1a) $t < 1$ Was 4 a solution?

Was 5 a solution?

Ex1b) $y \leq -4$



Ex1c) $3 > c$ Was -2 a solution?

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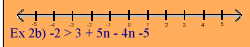
Solving inequalities: Solve like an equation:

Ex2a) $-2 + x + 5 \geq 3$



Ex 2b) $-2 > 3 + 5n - 4n - 5$

Ex2c) $-6(a + 2) + 7a < 12$

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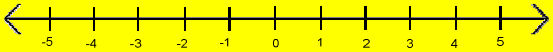
solve and graph.

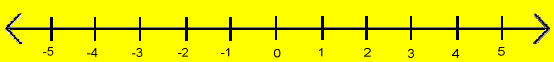
Is 5 a solution?

Try #1. $-4p - 4 + 5p < 1$



Try #2. $-3 \leq 7y - 2(3y + 4)$

Is 5 a solution?



Jan 26-1:30 PM

Ex3) *At least*: $\geq$ and *At Most*: $\leq$

Write an inequality statement for the following problems.

Ex3a) You hope to have gotten at least an 80 % C on your final.

Ex3b) Your mother says that you can have at most 5 people over for your party.

Jan 26-8:39 AM

4 EXAMPLE **Real-World Problem Solving**

Multiple Choice The maximum safe load of a chairlift is 680 lb. In the spring, a cyclist and bicycle go to the top of the slope using the chairlift. The weight of th person is 124 lb, and the weight of the bicycle is 32 lb. Which inequality best describes how much additional weight w the chairlift could safely carry?

(A) $124 + w \leq 680 + 32$ (B) $124 + 32 + w \leq 680$
(C) $32 + w \geq 680 + 124$ (D) $124 + 32 + w \geq 680$

Relate weight of a person and a bicycle | plus | additional weight | is at most | safe load

Define Let w = the amount of weight that can be added to the chairlift.

Write $124 + 32 \quad + \quad w \quad \leq \quad 680$

The inequality $124 + 32 + w \leq 680$ models the situation. So B is the correct answer.

Oct 22-1:41 PM

4 Your baseball team has a goal to collect at least 160 blankets for a shelter. Team members brought 42 blankets on Monday and 65 blankets on Wednesday. Write an inequality to describe how many blankets the team must donate on Friday to make or exceed their goal.

Vacation Budget Your brother has $2000 saved for a vacation. His airplane ticket is $637. Write and solve an inequality to find how much he can spend for everything else.

Fund-Raising A school club is selling reflectors for Bicycle Safety Day. Each member is encouraged to sell at least 50 reflectors. You sell 17 on Monday and 12 on Tuesday. How many reflectors do you need to sell on Wednesday to meet your goal?

Oct 22-1:44 PM