

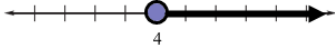
6.1-6.3: Solving Inequalities Study Guide

6.1-6.3: Solve Inequalities by Multiplication and Division:

Solve each inequality and graph your solution on a number line.

Ex: $2x - 1 \geq 7$

$x \geq 4$



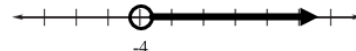
Ex: $-5 \geq 2x - 3$

$-1 \geq x$



Ex: $18 > -4x + 2$

$-4 < x$



6.3*: Solve Multi-Step Inequalities:

Solve each inequality.

Ex: $6(2x + 3) \geq 9(x + 2)$

$x \geq 0$

Ex: $3(4x - 2) < 2(6x - 2)$

any number

Ex: $-2(x + 4) \geq -2x - 3$

No solution

Ex: $-4(x - 2) \geq -x + 16$

$x \leq -\frac{8}{3}$

Ex: The photography club at your school decides to publish a calendar to make money. The cost to make all of the calendars is \$600 and they plan to sell the calendars at \$5.50 each. The club wants to make at least \$1200.

a) Write an inequality to show the number of calendars the photography club would need to sell in order to meet their goal.

$5.5x - 600 \geq 1200$

b) Solve your inequality.

$x \geq 327.3$

c) *Explain* using 3-5 complete sentences, what the solution means, including possible numbers of calendars the club could sell and one possible number of calendars that would not work.

Include in your solution that x must be greater than or equal to 327.3, which means that the club would need to sell at least 328 calendars or much. Provide possible numbers of calendars they *could* sell and provide possible numbers they could *not*.