

Notes 1-3

Sec 1 H

Solving Equations/Inequalities

Unit 1

Solve Equations with Justification:

Ex. 1: $2(5x + 4) = 7x - 4$	Justification
$\begin{array}{r} 10x + 8 = 7x - 4 \\ -7x \qquad -7x \end{array}$	Dist. Prop.
$\begin{array}{r} 3x + 8 = -4 \\ -8 \qquad -8 \end{array}$	Subtract Prop of Eq.
$\frac{3x}{3} = \frac{-12}{3}$	" " " "
$x = -4$	Divide Prop of Eq.

- Addition
- Subtraction
- Multiplication

- Division
- Distributive Property
- Combine Like Terms

Ex. 2: $-2x + 7 + 5x = -3x - 17$	Justification
$\begin{array}{r} 3x + 7 = -3x - 17 \\ +3x \qquad +3x \end{array}$	Combine Like Terms
$\begin{array}{r} 6x + 7 = -17 \\ -7 \qquad -7 \end{array}$	Add prop of Eq
$\frac{6x}{6} = \frac{-24}{6}$	Subtract prop of Eq
$x = -4$	Divide prop of Eq

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Unit 1

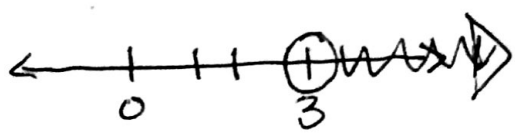
Solve Inequalities:

$<$ Less Than $>$ Greater Than

\leq L.T or Equal to \geq G.T. or Equal to

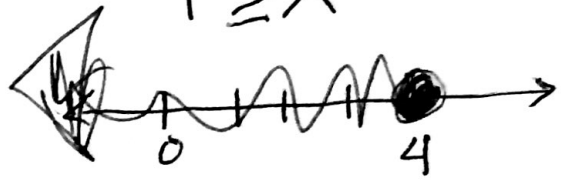
*If you
MULTIPLY or
DIVIDE both
sides by a
NEGATIVE,
then flip
the inequality.

$x > 3$



$x \leq 4$

$4 \geq x$



Ex. 3:

$\begin{array}{r} -11y - 9 > 13 \\ +9 \quad +9 \\ \hline -11y > 22 \\ -11 \quad -11 \\ \hline y < -2 \end{array}$	<p style="text-align: center;">Justification</p> <hr/> <p style="text-align: center;">Add prop of ineq.</p> <hr/> <p style="text-align: center;">Divide prop of ineq.</p>
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Ex. 4:

$\begin{array}{r} 7x + 9 \geq 10x - 12 \\ -7x \quad -7x \\ \hline 9 \geq 3x - 12 \\ +12 \quad +12 \\ \hline 21 \geq 3x \\ \frac{21}{3} \geq \frac{3x}{3} \\ 7 \geq x \end{array}$	<p style="text-align: center;">Justification</p> <hr/> <p style="text-align: center;">Subtract prop of ineq.</p> <hr/> <p style="text-align: center;">Add prop of ineq.</p> <hr/> <p style="text-align: center;">Divide prop of ineq.</p>
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