

I. Linear Inequality in One Variable:

$$\mathbf{ax + b \geq c} \quad (\text{general form})$$

where $\mathbf{a, b}$ and \mathbf{c} are *constants* (\leq , $<$ or $>$ are also possible)

e.g., $2\mathbf{x} + 5 < 13$ ($\mathbf{a} = 2$, $\mathbf{b} = 5$, $\mathbf{c} = 13$)

II. Method for Solving (p.256):

Manipulate (+, -, \times and/or \div) the inequality as if it were an equation in order to isolate the variable on one side;

EXCEPT — REVERSE the inequality SIGN whenever MULTIPLYING (or DIVIDING) by a NEGATIVE #

e.g., $2\mathbf{x} + 5 < 13$

$$2\mathbf{x} < 8 \text{ after subtracting } 5$$

$$\mathbf{x} < 4 \text{ after dividing by } 2$$

Note: the solution is ALL numbers less than 4
(*i.e.*, an infinite set of numbers)

III. Examples (p.262): Exercises #14,20,30,38

HW: p.262 / Exercises #3,13,15,17,19,25,33
Read pp.266-271 (section 4.2)