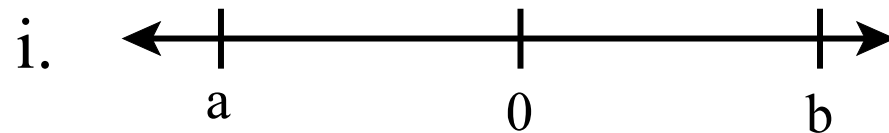
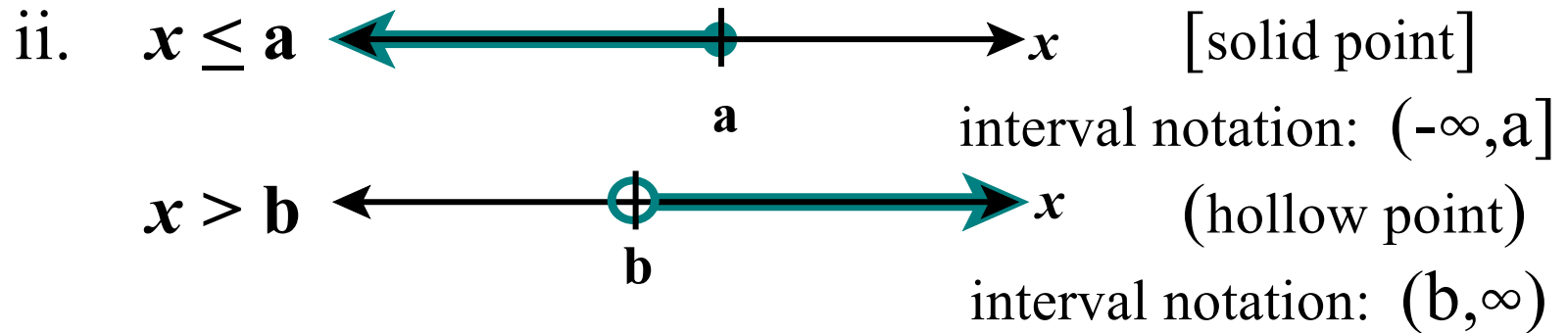


Linear Inequalities

I. Graphing:



a is negative, b is positive & $a < b$ (or $b > a$)



iii. Examples (p.249): Exercises #2,8

II. General Form: $ax + b \geq c$

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

e.g., $2x + 5 < 17$ ($a = 2$, $b = 5$, $c = 17$)

III. Method for Solving:

Simplify (+, -, \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., $2x + 5 < 17$

$$2x < 12 \quad \text{after subtracting } 5$$

$$x < 6 \quad \text{after dividing by } 2$$

IV. Examples (pp.249-251): Exercises #18,34,44,48,74

HW: pp.249-251 / Exercises#7-51 (every other odd),69,73,77

- I. Intersection (\cap) of two sets: see p.253 ~ AND
 - II. Union (\cup) of two sets: see p.256 ~ OR
 - III. Basic Examples (p.259): Exercises #2,4,34
 - IV. More Examples (pp.259-261): Exercises #18,42,54,68
- HW: pp.258-260 / Exercises #1-57(every other odd),67,79,81
Read section 4.3 (pp.262-271)