

§6-3 Graphing to Solve Systems of Inequalities (p308)

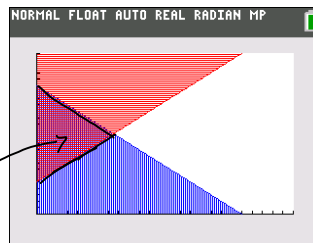
Example 1 - Solving a problem with discrete whole-number variables

let  $x$  be the # of aluminum boats  
 $y$  be the # of fiberglass boats.

$x \in \mathbb{W}$  (domain)  
 $y \in \mathbb{W}$  (range)

- (A)  $x + y \leq 20$
  - (B)  $x + 5 \leq y$
- ① Graph by hand (find  $x$  and  $y$ -intercepts)  
 ② Calculator (remember that it needs to be  $y = \text{stuff}$ )

- (A)  $y \leq 20 - x$
- (B)  $y \geq x + 5$



(solution for the system comes from the feasible region)  
 $(x, y) \rightarrow$  from set of whole numbers

Example 3

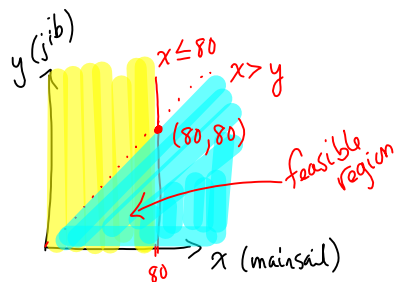
let  $x$  be the % of mainsail out  
 $y$  be the % of jib out

$x \in \mathbb{R}, x \geq 0$

$y \in \mathbb{R}, y \geq 0$

$x \leq 80$

$x > y$  ( $y < x$ )



TODO

- ① Look over Summary (p317)
- ② CYU (p317-318)
- ③ Practising (p318) - 6, 7, 9, 10

\* If you want to check a solution, the point must satisfy BOTH inequalities.