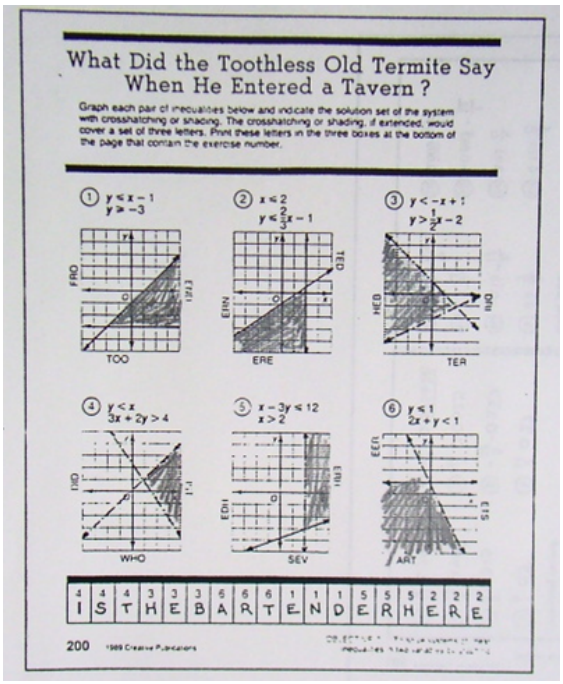
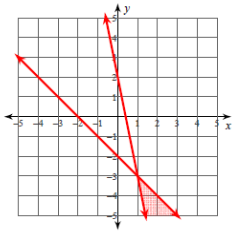
SOLUTIONS...

PUZZLE WORKSHEET:

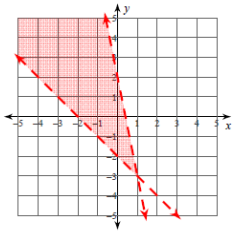


WORKSHEET:

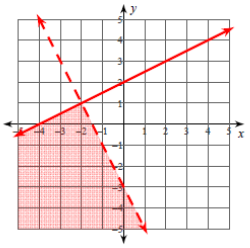
1) $y \le -x - 2$
$y \ge -5x + 2$



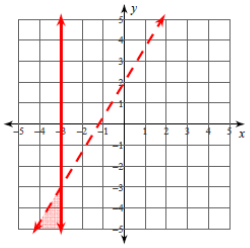
2) $y > -x - 2$
$y < -5x + 2$



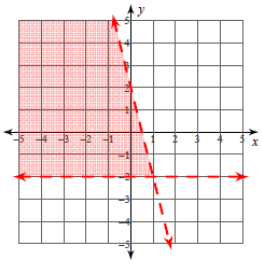
3) $y \le \frac{1}{2}x + 2$
$y < -2x - 3$



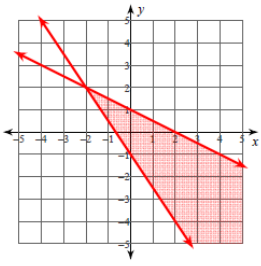
4) $x \le -3$
$y < \frac{5}{3}x + 2$



5) $4x + y < 2$
$y > -2$

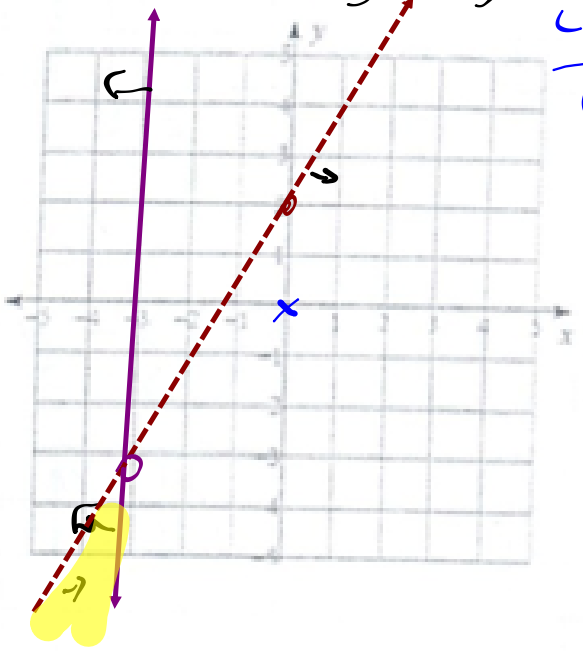


6) $3x + 2y \ge -2$
$x + 2y \le 2$



4) $x \leq -3$

$y < \frac{5}{3}x + 2$



$x \leq -3$

$y < \frac{5}{3}x + 2$

$(5 < RS)$

0	$\frac{5}{3}(0) + 2$
	< 2

Yes

$x = -3$ (vertical)

$y = \frac{5}{3}x + 2$

$-\frac{5}{-3}$

WARM-UP: Graph the solution and state 2 possible solutions...

$\{(x,y) \mid 2x+y>8, x\varepsilon W, y\varepsilon W\}$ ← Quad I

$\{(x,y) \mid y\leq 2, x\varepsilon W, y\varepsilon W\}$

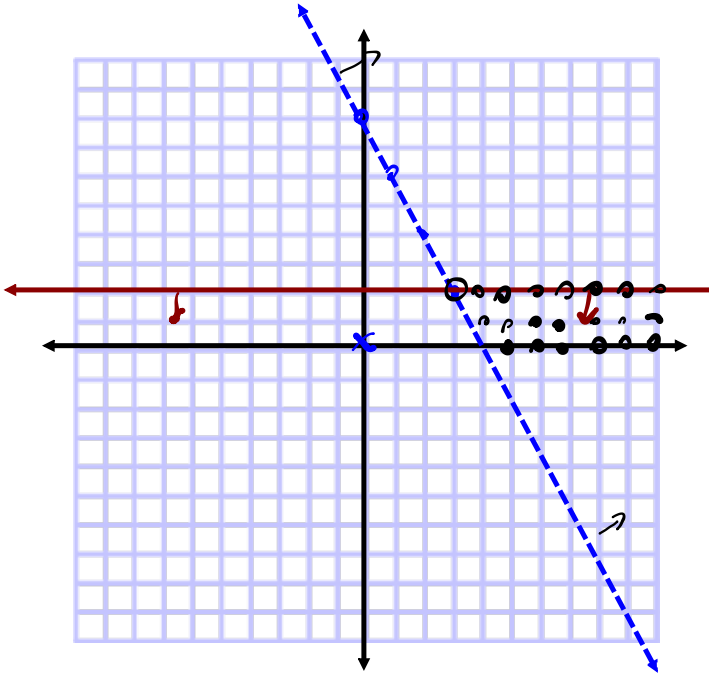
$2x+y=8$

$y=-2x+8$

LS > RS

$2(0)+0$	8
0	> No

$y=2$



Applications: Systems Involving Inequalities

STEP 1 - Declare Variables
State Restrictions

STEP 2 - Create Linear Inequalities

STEP 3 - Graph Solution Set

STEP 4 - Answer question(s)

EXAMPLE #1:

To raise funds for π - day, the PI Committee has 500 T-shirts to sell.

They have two varieties:

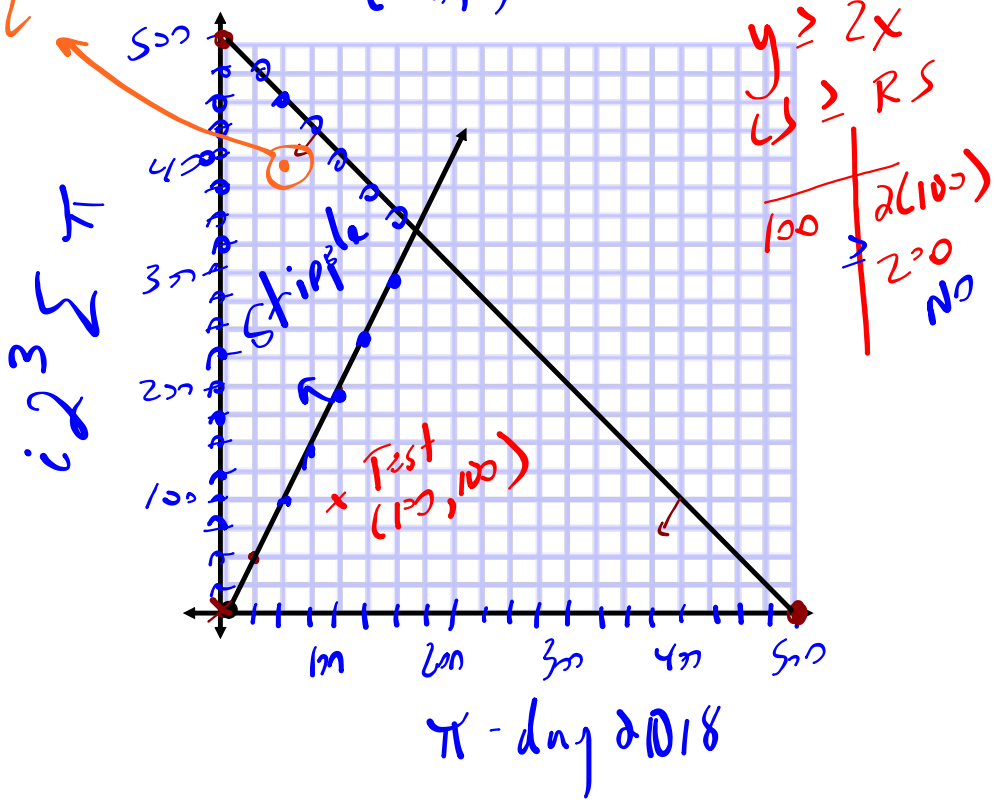
#1. 'I 8 Sum π' or #2.'π- DAY 2018'.

They expect to sell at least twice as many of the first as the second.

a) Define the variables and restrictions. Write a system of linear inequalities that models the situation.

b) Graph the system of inequalities.

State a combination of T-shirt sales.



Variables...

Independent - is plotted on the x axis

ex: time, shots on goal

Dependent - is plotted on they axis

ex: distance, goals scored

REMEMBER... You have ID the XY

ASK YOURSELF... 'What depends on what?'

HOMEWORK...

Quiz Tomorrow

p. 225: #1 & 2

p. 235: #2, 5 & 6