Algebra 1 6.6 * Ch. 5.6

Solve systems of linear inequalities by graphing

Apply systems of linear inequalities

linear inequality*

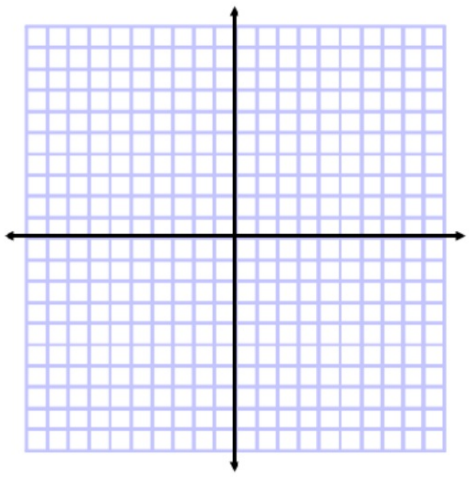
system

boundary

open

closed

Whiteboards



$2 \cdot 0 + 0 \geq 2$

$0 \geq 2$

1B $2x + y > 2$

$2x + y < 4$

$2 \cdot 0 + 0 < 4$

$0 < 4$

$2x + y = 2$

$-2x \quad -2x$

$y = -2x + 2$

1

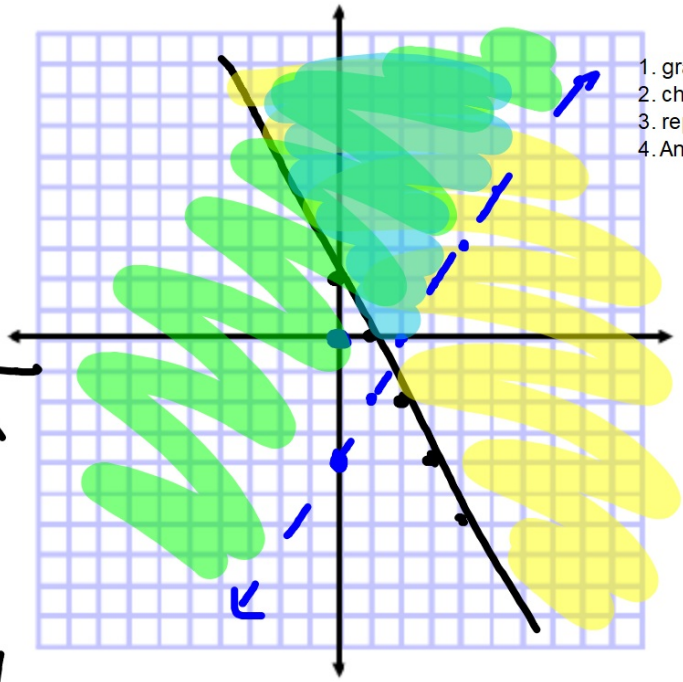
$2x - y = 4$

$-2x \quad -2x$

$\frac{-y}{-1} = \frac{-2x}{-1} + \frac{4}{-1}$

$y = 2x - 4$

1



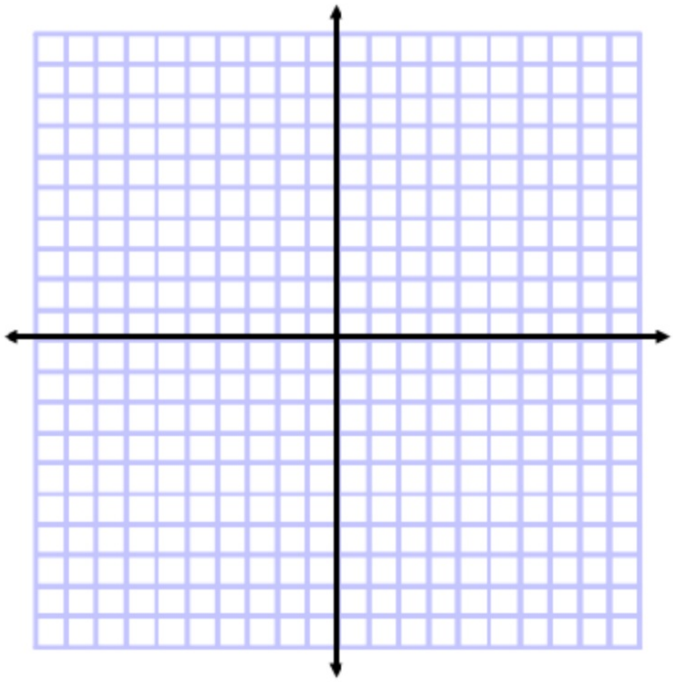
1. graph boundary (solid or dotted?)
2. choose a test point and shade T
3. repeat for other inequality
4. Answer?

Whiteboards

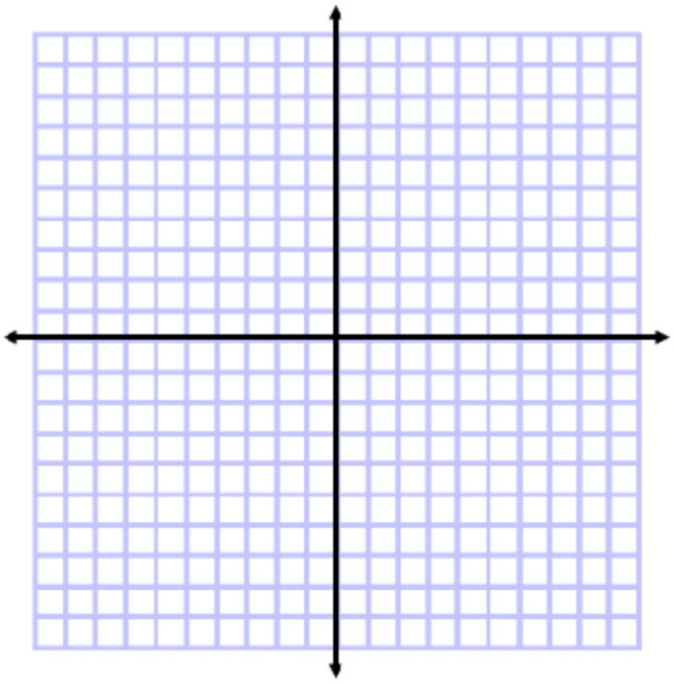
Whiteboards

1C $y \geq -4$

$3x + y \leq 2$



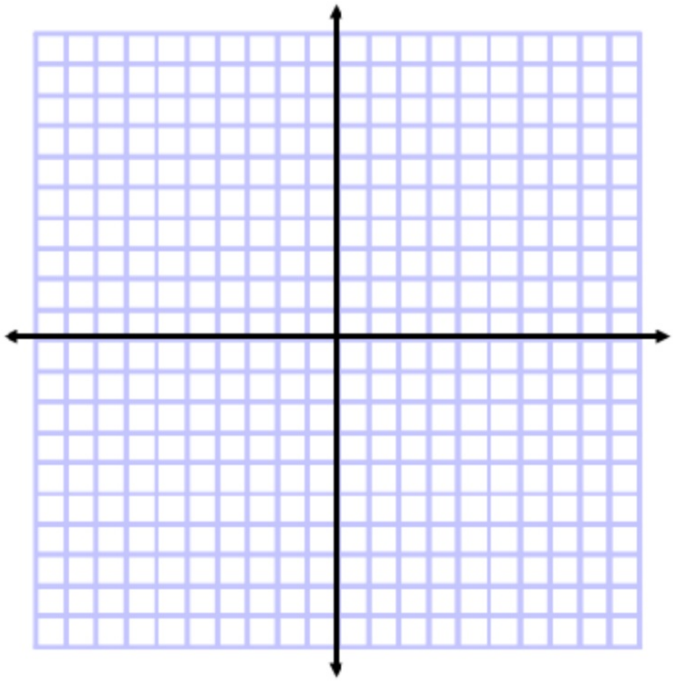
1D. $x + y > 2$
$-4x + 2y < 8$



GuidedPractice

2A. $y > 3$

$y < 1$



25. ICE RINKS Ice resurfacers are used for rinks of at least 1000 square feet and up to 17,000 square feet. The price ranges from as little as $10,000 to as much as $150,000.

a. Define the variables, and write a system of inequalities to represent this situation. Then graph the system.

b. Name one possible solution.

c. Is (15,000, 30,000) a solution? Explain.

S

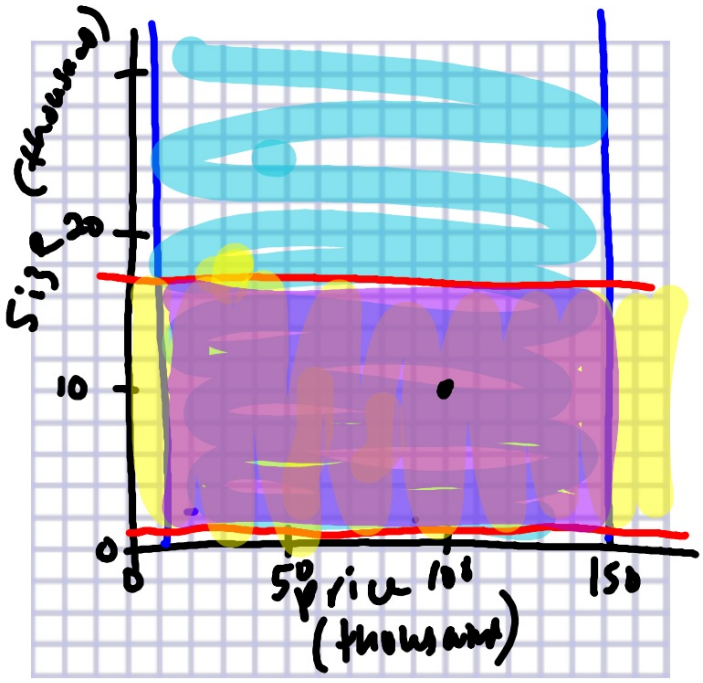
P

no

$1000 < S < 17000$

$10{,}000 < P < 150{,}000$

$100,000, 10,000 ft^2$



2B. $x + 6y \leq 2$

$y \geq -\frac{1}{6}x + 7$