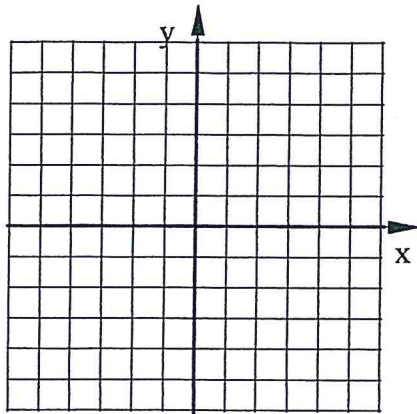


Bellwork Alg 2A Monday, November 28, 2016

1. Graph this system of inequalities. Shade the solution region a separate color.

$$y < \frac{1}{2}x + 6 \quad 2x + 4y < 24 \quad y \geq -2x - 4 \quad 6x - 3y \leq 12$$



2. John is packing books into boxes. Each box can hold either 15 small books or 9 large books. He needs to pack at least 24 boxes and ship at least 270 books. Boxes containing small books cost \$8 to ship. Boxes containing large books cost \$9.60 to ship. He only has \$240 to spend on shipping. Write a system of **FIVE** inequalities to model this situation.

L = # boxes of large books

S = # boxes of small books

Bellwork Alg 2A Monday, November 28, 2016

Answers

1. Graph this system of inequalities. Shade the solution region a separate color.

$$y < \frac{1}{2}x + 6$$

shade below

$$2x + 4y < 24$$

$$y < \frac{24 - 2x}{4}$$

$$y < 6 - \frac{1}{2}x$$

shade below

$$y \geq -2x - 4$$

shade above

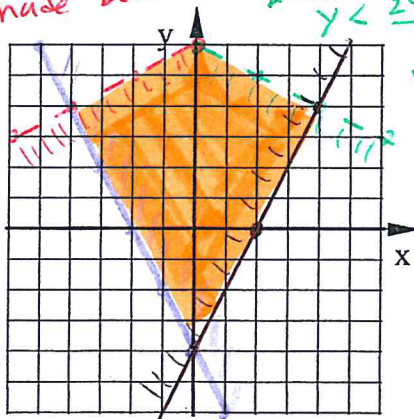
$$6x - 3y \leq 12$$

$$x\text{-int} = 2$$

$$y\text{-int} = -4$$

TEST (0,0)

$0 \leq 12 \rightarrow \text{true}$
shade side with (0,0)



2. John is packing books into boxes. Each box can hold either 15 small books or 9 large books. He needs to pack at least 24 boxes and ship at least 270 books. Boxes containing small books cost \$8 to ship. Boxes containing large books cost \$9.60 to ship. He only has \$240 to spend on shipping. Write a system of **FIVE** inequalities to model this situation.

L = # boxes of large books

S = # boxes of small books

$$9.60L + 8S \leq 240$$

$$L \geq 0$$

$$S \geq 0$$

$$L + S \geq 24$$

$$9L + 15S \geq 270$$