

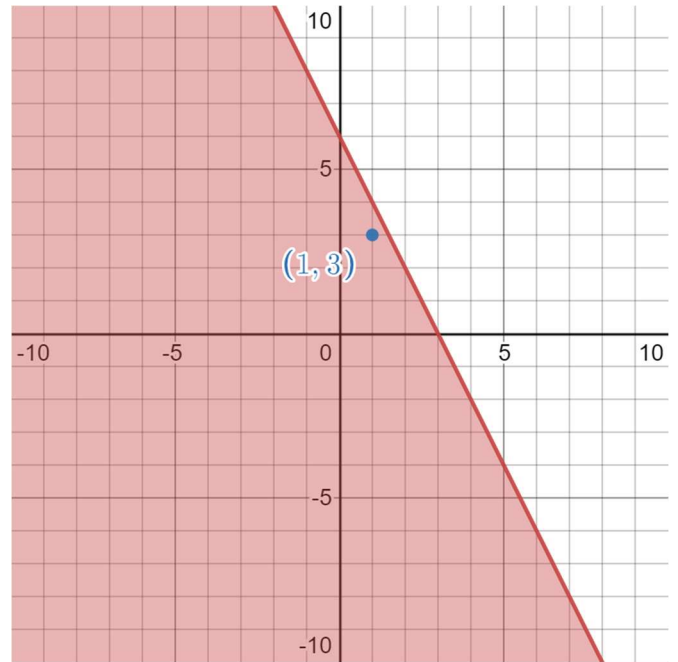
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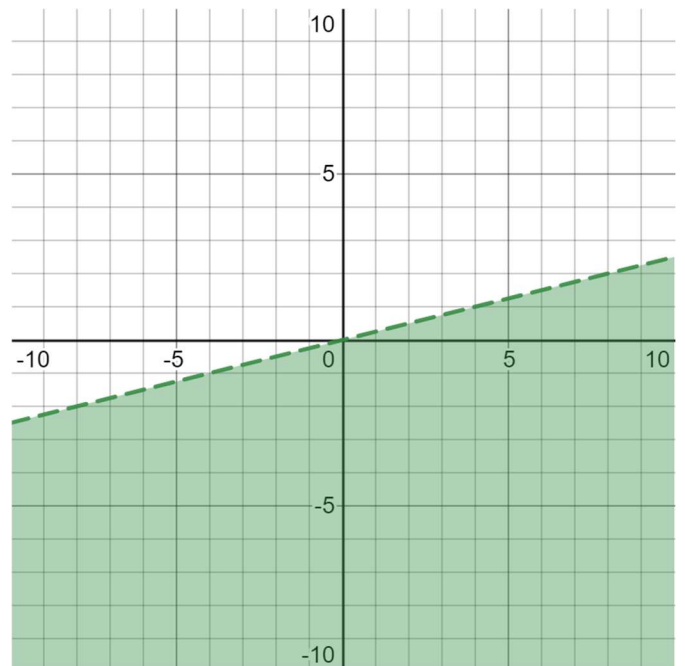
**Learning Goal 9.1**

Solving linear inequalities.

1. Graph  $4x + 2y \leq 12$  and determine whether  $(1, 3)$  is part of the solution.



2. Graph  $5x - 20y > 0$ .

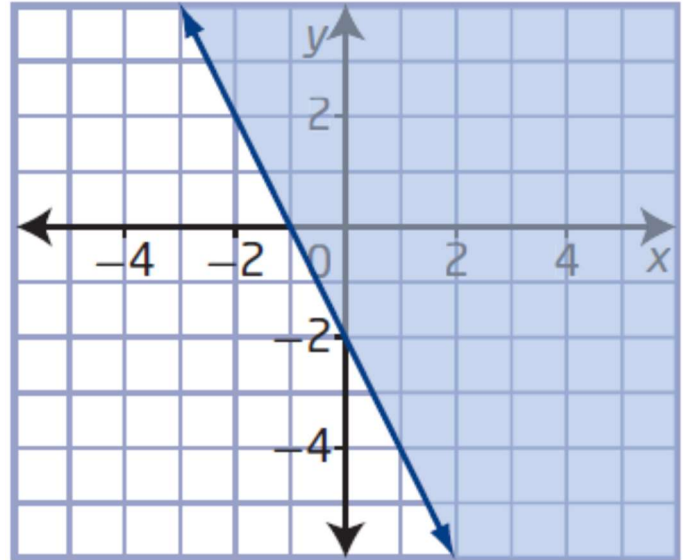


3. Write an inequality to represent the graph.

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

$$y - 2 \geq -2(x + 2)$$

$$2x + y \geq -2$$



4. Find all possible combinations of tile and stone that can be used to make a mosaic. Tile costs \$2.50/ft<sup>2</sup>, stone costs \$6/kg and the budget for the mosaic is \$150.

Let  $t$  = the number of square feet of tile purchased and

let  $s$  = the number of kilograms of stone purchased

$$\frac{5}{2}t + 6s \leq 150$$

