

Problem 10

Sketch the region in the plane defined by each of the following equations or inequalities.

(a) $\max\{x, 2y\} = 1$

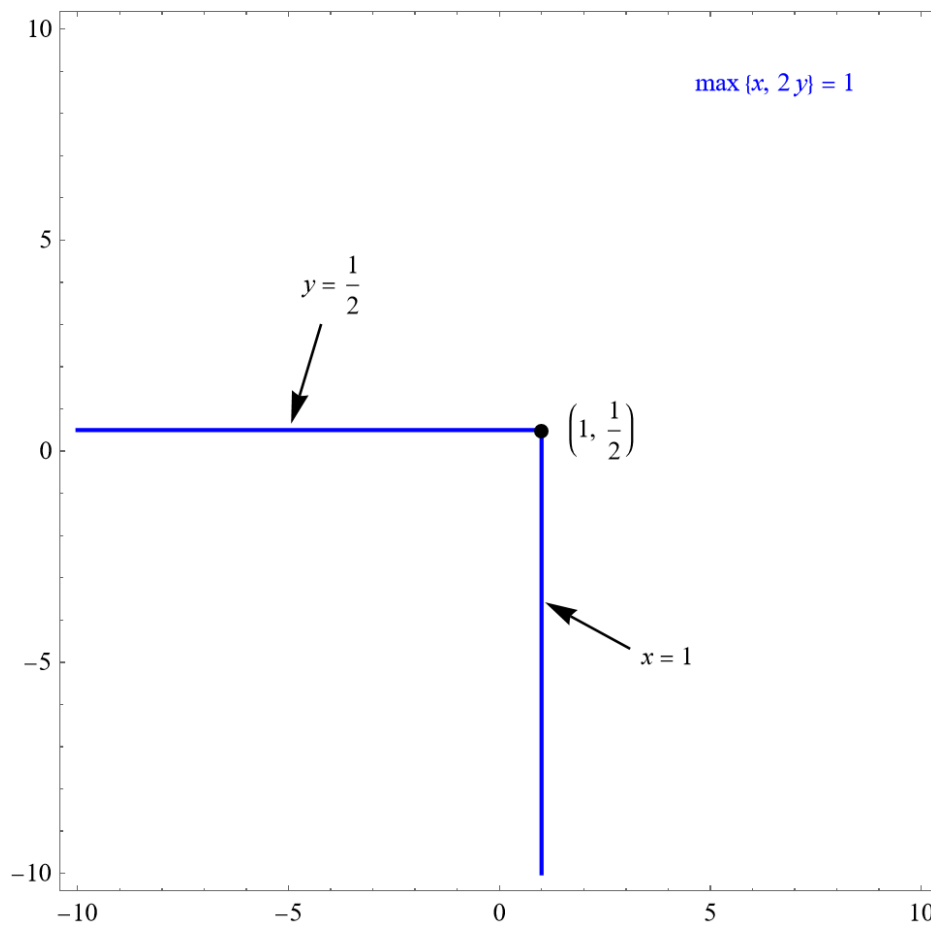
(b) $-1 \leq \max\{x, 2y\} \leq 1$

(c) $\max\{x, y^2\} = 1$

Solution

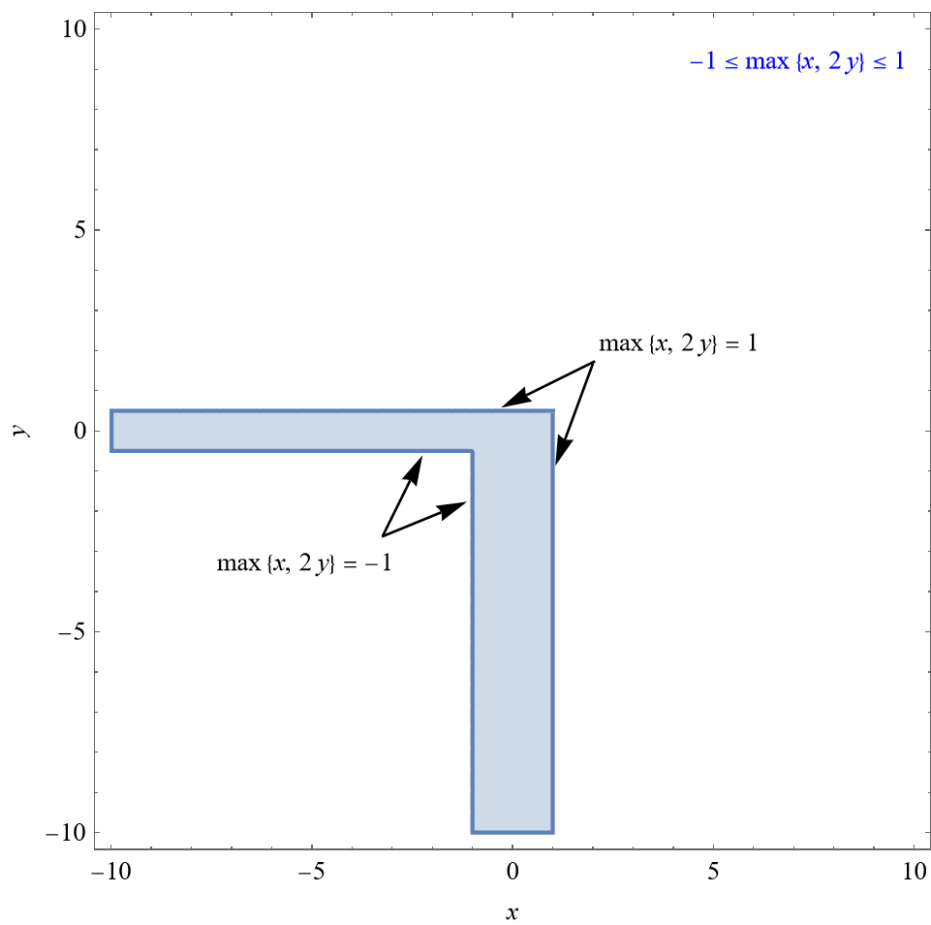
Part (a)

Below is a graph of $\max\{x, 2y\} = 1$.



Part (b)

Below is a graph of $-1 \leq \max\{x, 2y\} \leq 1$.



Part (c)

Below is a graph of $\max\{x, y^2\} = 1$.

