Contour Maps

In this worksheet, you will practice creating contour maps for functions of two variables.

[1] Let \( f(x, y) = xy \). Find equations for the following level curves and graph them in an \( xy \)-plane in the space below. Be sure to label the level curves on your graph.

(a) \( f = 1 \)
(b) \( f = 3 \)
(c) \( f = -1 \)
(d) \( f = -3 \)
(e) \( f = 0 \)
2. Let \( f(x, y) = x^2 - y^2 \). Find equations for the following level curves and graph them in an \( xy \)-plane in the space below. Be sure to label the level curves on your graph.

(a) \( f = 1 \)
(b) \( f = 2 \)
(c) \( f = -1 \)
(d) \( f = -2 \)
(e) \( f = 0 \)