Worksheet 1

All problems refer to problems at the end of Section 14.2 of your text.

1. For Problem 7, compute the limit along each of the following paths.

   (a) \( y = 0 \)
   (b) \( x = 0 \)
   (c) \( y = 2x \)
   (d) \( y = x \)
   (e) \( y = x/2 \)
   (f) \( y = -x/2 \)
   (g) \( y = -x \)
   (h) \( y = -2x \)

2. Sketch a contour plot of the function in Problem 7.

3. For Problems 9, 11 and 13, compute limits along each of the following paths.

   (a) \( y = 0 \)
   (b) \( x = 0 \)
   (c) \( y = x \)
   (d) \( y = -x \)

4. For Problem 13, compute the limit along the path \( y = x^2 \).