

Linear Functions

1. Consider the function $f(x, y) = 4 + x - 2y$.
2. Fill out a table of values for this function for x and y from -5 to 5 , in increments of 1 .
3. Using your table of numbers, sketch the contour lines for this function.
4. Determine the contour lines using algebra.
5. Suppose you are standing at the origin on this surface. In what direction would you have to walk to maintain your altitude? In what direction is it the steepest up? In what direction is it the steepest down?