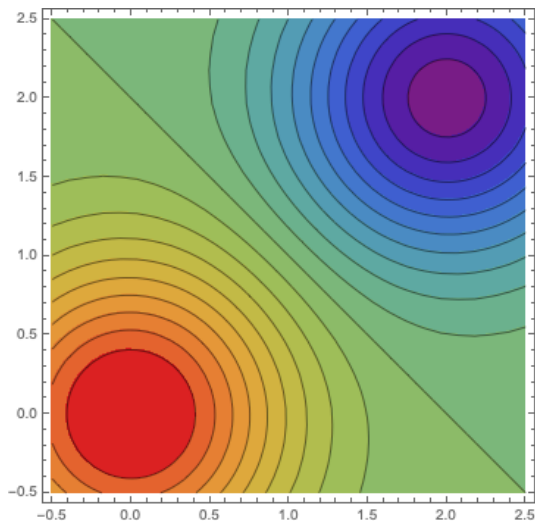


A contourplot of $z = f(x, y)$ is shown below



1. Is $f_x(1.5, 1.5)$ positive or negative?
2. Is $f_y(1.5, 1.5)$ positive or negative?
3. At the point $(1.5, 1.5)$, is the surface increasing or decreasing if you walk in the northeast direction? How about in the southeast direction?
4. Answer the same questions at the point $(0.5, 0.5)$