

14.1, number 61: **Find the equation of the level set of**

$$f(x, y, z) = \sqrt{x - y} - \ln z$$

which passes through $(3, -1, 1)$.

Answer: Observe that $f(3, -1, 1) = \sqrt{3 - (-1)} - \ln(1) = 2$. Thus:

The level set of f that passes through $(3, -1, 1)$ is $2 = \sqrt{x - y} - \ln z$.