

$yz = \ln(x + z)$, so let $F(x, y, z) = yz - \ln(x + z) = 0$. Then

$$\frac{\partial z}{\partial x} = -\frac{F_x}{F_z} = -\frac{-\frac{1}{x+z} (1)}{y - \frac{1}{x+z} (1)} = \frac{1}{y(x+z) - 1} \quad \text{and}$$

$$\frac{\partial z}{\partial y} = -\frac{F_y}{F_z} = -\frac{z}{y - \frac{1}{x+z}} = -\frac{z(x+z)}{y(x+z) - 1}$$