(a) $r^2 = x^2 + y^2 = 3^2 + (3)^2 = 18$ so $r = 3\sqrt{2}$; $\tan\theta = \dfrac{y}{x} = \dfrac{3}{-3} = -1$ and the point $(3, -3)$ is in the fourth quadrant of the xy-plane, so $\theta = \frac{7\pi}{4} + 2n\pi$; $z = 1$. Thus, one set of cylindrical coordinates is $\left(3\sqrt{2}, \frac{7\pi}{4}, 1\right)$.

(b) $r^2 = (-1)^2 + \left(-\sqrt{3}\right)^2 = 4$ so $r = 2$; $\tan\theta = \dfrac{-1\sqrt{3}}{-} = \sqrt{3}$ and the point $\left(-1, -\sqrt{3}\right)$ is in the third quadrant of the xy-plane, so $\theta = \frac{4\pi}{3} + 2n\pi$; $z = 4$. Thus, one set of cylindrical coordinates is $\left(2, \frac{4\pi}{3}, 4\right)$.