Given that $z = 1 - \sqrt{3}i$, write down the conjugate $\bar{z}$ and express $\bar{z}^2$ in polar form.　　　　**4**

Answer:

$1 + \sqrt{3}i$

$$\bar{z}^2 = 4\left(\cos\frac{2\pi}{3} + i\,\sin\frac{2\pi}{3}\right)$$