2) Verify that $z_1 = 1 + i$ and $z_2 = 1 - i$ satisfy the equation
$$z^2 - 2z + 2 = 0$$

Let $z = z_1$:
$$\begin{aligned}
z_1^2 - 2z_1 + 2 &= (1+i)^2 - 2(1+i) + 2 \\
&= (1 + 2i - 1) - 2 - 2i + 2 \\
&= 2i - 2i \\
&= 0
\end{aligned}$$

Thus, z_1 satisfies the equation.

Let $z = z_2$:
$$\begin{aligned}
z_2^2 - 2z_2 + 2 &= (1-i)^2 - 2(1-i) + 2 \\
&= (1 - 2i - 1) - 2 + 2i + 2 \\
&= -2i + 2i \\
&= 0
\end{aligned}$$

Thus, z_2 satisfies the equation