

3.43  
2

22 3.36  $\sqrt{22} \cdot k$

$$(2-i)(3+i)z^2 = -1-7i$$

$$z^2 = \frac{-1-7i}{7-i} \cdot \frac{7+i}{7+i} = \frac{-50i}{50} = -i$$

$$a+bi = \sqrt{-i}$$

$$a^2 - b^2 = 0$$

$$2ab = -1$$

$$\rightarrow a = \frac{-1}{2b}$$

$$-b^2 \pm \frac{1}{4b^2} = 0$$

$$4b^4 = 1$$

$$b = \pm \frac{1}{2}$$

$$z_1 = \frac{1}{\sqrt{2}}(-1+i)$$

$$z_2 = \frac{1}{\sqrt{2}}(1-i)$$

$$a = -\frac{1}{\sqrt{2}}$$

$$a = \frac{1}{\sqrt{2}}$$

$$b = \frac{1}{\sqrt{2}}$$

$$b = -\frac{1}{\sqrt{2}}$$