Ü quadratische Ergänzung

$$z^2 - (4-2i)z + (5-4i) = 0$$

$$z^2 - \underbrace{(4-2i)}_{p} z = -(5-4i)$$

$$z^2 - (4-2i)z + \left(\frac{4-2i}{2}\right)^2 = \left(\frac{4-2i}{2}\right)^2 - 5 + 4i$$

$$\left(z - (2-i)\right)^2 = (2-i)^2 - 5 + 4i$$

$$= 4 - 4i + i^2 - 5 + 4i$$

$$= -2$$

$$\Rightarrow \quad \left(z - (2-i)\right) = \pm i\sqrt{2}$$

$$z_{1,2} = 2 - i \pm i\sqrt{2}$$