

### 0.0.1 25. Hausaufgabe

#### Selbstgestellte Aufgabe

$$z \mapsto w = -2iz^* + 2 + 4i;$$

$$x_0 + iy_0 = -2i(x_0 - iy_0) + 2 + 4i = -2ix_0 - 2y_0 + 2 + 4i;$$

$$\Rightarrow x_0 + 2y_0 - 2 = i(-2x_0 - y_0 + 4);$$

$$\Rightarrow \left\{ \begin{array}{l} x_0 + 2y_0 - 2 = 0; \Rightarrow x_0 = 2 - 2y_0; \\ -2x_0 - y_0 + 4 = 0; \Rightarrow x_0 = 2 - \frac{y_0}{2}; \quad y_0 = 4 - 2x_0; \end{array} \right\}$$

$$\Rightarrow \left\{ \begin{array}{l} 2 - 2y_0 = 2 - \frac{y_0}{2}; \Rightarrow 4y_0 = y_0; \Rightarrow y_0 = 0; \\ x_0 = 2 - 2(4 - 2x_0) = 2 - 8 + 4x_0 = -6 + 4x_0 = 0; \Rightarrow x_0 = 2; \end{array} \right.$$

$$\Rightarrow z_0 = 2;$$

