

Mathematische Grundlagen

Übungsblatt 3 – Lösungen

1. (a) 0

(b) $\frac{3(2a^2 - b^2)}{4ab(2a - b)}$

2.

3. (a) i

(b) $2i$

(c) $(3 - 4i)/5$

4.

5.

$$\begin{aligned} z - z_m &= \frac{5t + i}{t + i} - 3 \\ &= \frac{2t - 2i}{t + i} \\ &= 2 \frac{t - i}{t + i} \\ \Rightarrow |z - z_m| &= 2 \end{aligned}$$