

Section 2.15 limit practice

Prove the following limits using ϵ 's and δ 's.

(1)

$$\lim_{z \rightarrow 1+i} (3z - 4) = 3i - 1$$

(2)

$$\lim_{z \rightarrow i} z^2 + 4 = 3$$

(3)

$$\lim_{z \rightarrow 0} \frac{z^2}{\bar{z}} = 0$$

(4)

$$\lim_{z \rightarrow 3} \frac{1}{z^2} = \frac{1}{9}$$