2.15 Homework Problems - Limits

(15.1a) Show $\lim\limits_{z \to z_0} \operatorname{Re} z = \operatorname{Re} z_0$.

(15.1b) Show $\lim\limits_{z \to z_0} \bar{z} = \bar{z}_0$.

(15.2a) Show $\lim\limits_{z \to z_0} (az + b) = az_0 + b$, where a and b are complex constants.

(15.2b) Show $\lim\limits_{z \to 1-i} [x + i(2x + y)] = 1 + i$.

(15.A) Show $\lim\limits_{z \to 2} z^2 + iz = 4 + i2$.

(15.B) Show $\lim\limits_{z \to -i} \dfrac{1}{z} = i$.

(15.C) Show $\lim\limits_{z \to 4i} \dfrac{z}{\bar{z}} = -1$.