

1. Prove the following statements from §1.2.1

- (a) If the functions f and g on $\Omega \in \mathbb{C}$ are continuous, then so are the functions $(f + g)$ and fg .
- (b) A function f is continuous at $z_0 = x_0 + iy_0$ if and only if f is continuous when viewed as a function of two real variables x and y .
- (c) If f is a continuous complex valued function, then the real valued function $g(z) = |f(z)|$ is also continuous.

2. For §1.2.2 solve the Book Problems #7, 8, 9, 10, 12, 13 page 25.