Chapter 1

1.1

This is a simple LaTeX file.

The equation: $f(x) = (x-3)^2 + \frac{1}{3^2}$ has domain $D_f = (-\infty, +\infty)$ and range $R_f = \left[\frac{1}{2}, +\infty\right)$

1.2

$$\lim_{x \to a^-} f(x)$$
$$\lim_{x \to a^+} f(x)$$

1.3

$$\lim_{x \to a} \frac{f(x) - f(a)}{x - a} = f'(a)$$

1.4

$$\int \sin x \, dx = -\cos x + C$$

1.5