

Evaluate the following limits, showing your work.

(a)

$$\lim_{x \rightarrow 4} x^2 + 2\sqrt{x} + 5$$

(b)

$$\lim_{x \rightarrow -1} \sqrt{2x^3 + |x| + 5}$$

(c)

$$\lim_{x \rightarrow 100} 5$$

(d)

$$\lim_{x \rightarrow 0} \frac{x^2 + 1}{x}$$

(e)

$$\lim_{x \rightarrow -5} \frac{1}{x + 2}$$

(f)

$$\lim_{x \rightarrow a} \frac{a^2 + 3a}{a}$$

(g)

$$\lim_{x \rightarrow -5} \frac{1}{x + 2}$$