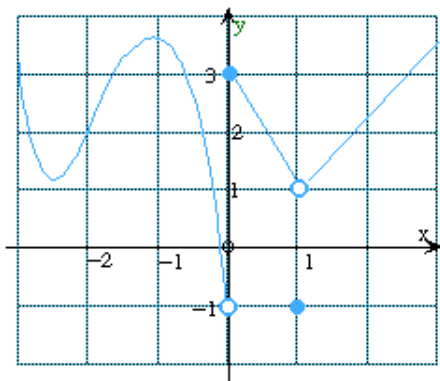


## MA1 Homework 6

1. For the function  $f$  graphed below, find:



- a.  $\lim_{x \rightarrow 0} f(x) =$
- b.  $\lim_{x \rightarrow 0^+} f(x) =$
- c.  $\lim_{x \rightarrow 0^-} f(x) =$
- d.  $\lim_{x \rightarrow 1} f(x) =$
- e.  $\lim_{x \rightarrow \infty} f(x) =$
- f.  $\lim_{x \rightarrow -2} f(x) =$
2.  $\lim_{x \rightarrow 4} \frac{\frac{2}{x-3} - \frac{8}{x}}{x-4} =$
3.  $\lim_{x \rightarrow \infty} \frac{\sqrt{4x^2 + 17x + 3}}{7 - 9x} =$
4.  $\lim_{x \rightarrow -\infty} \frac{\sqrt{4x^2 + 17x + 3}}{7 - 9x} =$
5.  $\lim_{x \rightarrow -\infty} \frac{5 + 7x}{\sqrt{5 + 7x^2}} =$
6.  $\lim_{x \rightarrow \infty} \frac{\sqrt{x^5 + 4x^7}}{\sqrt{2x^7 + 8x^5 + 7x^3}} =$
7.  $\lim_{x \rightarrow 0} \frac{x}{|x|} =$
8.  $\lim_{x \rightarrow 0^-} \frac{x}{|x|} =$
9.  $\lim_{x \rightarrow 0^+} \frac{x}{|x|} =$
10.  $\lim_{x \rightarrow 0} \pi^2 =$