Exercises on Limits and undecided cases

For each of the following functions calculate the limits at the ends of each interval of their definition set and chart the results in a small chart, and indicate the asymptotes if any.

(1) $f(x)=\frac{1}{6}x^3+\frac{1}{4}x^2-3x+2$

x	$-\infty$	$+\infty$
limits of f		

(2) $f(x)=x^4-4x^2+1$

x	$-\infty$	$+\infty$
limits of f		

(3) $f(x)=\frac{2x^2+8x+1}{x(x+4)}$

x	$-\infty$	$+\infty$
limits of f		

(4) $f(x)=\frac{x^2+2x+3}{x^2-2x-3}$

x	$-\infty$	$+\infty$
limits of f		

(5) $f(x)=\frac{x}{1-x^2}$

x	$-\infty$	$+\infty$
limits of f		

(6) $f(x)=\frac{(x+1)^2}{x^2-x-6}$

x	$-\infty$	$+\infty$
limits of f		

(7) $f(x)=\frac{2x^3-x^2+2}{(2x-3)^2}$

x	$-\infty$	$+\infty$
limits of f		

(8) $f(x)=x+1+\frac{2}{x-1}$

x	$-\infty$	$+\infty$
limits of f		

(9) $f(x)=\frac{2x}{x^2+2x+1}$

x	$-\infty$	$+\infty$
limits of f		

(10) $f(x)=\frac{2x^2+4x-1}{x-2}$

x	$-\infty$	$+\infty$
limits of f		