$\lim_{x\to\infty} \frac{100}{x^2+5}$	0	degree of Num < degree of Denom
$\lim_{x\to-\infty} \frac{7}{x^3-20}$	0	degree of Num < degree of Denom
$\lim_{x\to\infty} 3x^3-1000x^2$	∞	degree of Num > degree of Denom
$\lim_{x\to-\infty} x^3+5x^2+1$	-∞	degree of Num > degree of Denom
$\lim_{x\to\infty} x^5-x^2+x-10$	∞	degree of Num > degree of Denom
$\lim_{x\to-\infty} \frac{x+7}{3x+5}$	$\frac{1}{3}$	degree of Num = degree of Denom
$\lim_{x\to\infty} \frac{7x^2+x-100}{5x-2x^2}$	$-\frac{7}{2}$	degree of Num = degree of Denom

$\lim_{x\to\infty} \frac{x^2-3x+7}{x^3+10x-4}$	0	degree of Num < degree of Denom
$\lim_{x\to\infty} \sqrt{\frac{x^2+7}{4x^3+5}}$	0	degree of Num < degree of Denom
$\lim_{x\to\infty} \frac{x^2+7}{\sqrt{4x^4+5}}$	$\frac{1}{2}$	degree of Num = degree of Denom
$\lim_{x\to-\infty} \frac{x^2+7}{\sqrt{4x^4+5}}$	$\frac{1}{2}$	degree of Num = degree of Denom
$\lim_{x\to\infty} \frac{x+2}{\sqrt{9x^2+5}}$	$\frac{1}{3}$	degree of Num = degree of Denom
$\lim_{x\to-\infty} \frac{x+2}{\sqrt{9x^2+5}}$	$-\frac{1}{3}$	degree of Num = degree of Denom