

$f(x) = 6(x-1)/x^3$, $f' = 6(3-2x)/x^4$, $f'' = 36(x-2)/x^5$
 f is not defined at 0; there is no symmetry; $f(1) = 0$
 vertical asymptote: $\lim_{x \rightarrow 0^+} f(x) = -\infty$, $\lim_{x \rightarrow 0^-} f(x) = +\infty$
 $\lim_{x \rightarrow \pm\infty} f(x) = 0$ (x axis a horizontal asymptote)

I $f'(x) = 0$ when $x = 3/2$
 f' $\begin{array}{c} + \quad | \quad + \quad | \quad - \\ \hline \nearrow \quad 0 \quad \nearrow \quad 3/2 \quad \searrow \end{array}$
 f

f has a local max. at $x = 3/2$

II $f''(x) = 0$ when $x = 2$
 f'' $\begin{array}{c} + \quad | \quad - \quad | \quad + \\ \hline \cup \quad 0 \quad \cap \quad 2 \quad \cup \end{array}$
 f

f has an inflection point at $x = 2$
 [NOT at 0!].

III

x	-4	-2	-1	(0)	1	$3/2$	2	4
f	.47	2.25	12	$\uparrow \downarrow$	0	.9	.75	.28
						max	infl	

