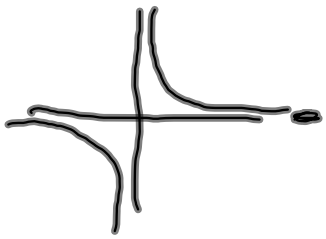
24) $\lim_{x\to-\infty}\left(\frac{1}{2}x-\frac{4}{x^2}\right)$

$\lim_{x\to-\infty}\frac{x^3-8}{2x^2}$ none



26) $\lim_{x\to-\infty}\frac{x}{\sqrt{x^2+1}}$ $\frac{x}{|x|}$

-1

28) $\lim_{x\to-\infty}\frac{-3x+1}{\sqrt{x^2+x}}$ $\frac{-3x}{|x|}$

3

32) $\lim_{x\to\infty}\cos\left(\frac{1}{x}\right)=\cos(0)=1$

50) $y = \frac{x-3}{x-2}$

domain: $\mathbb{R}$ except $\{2\}$

vertical asymptote: $x = 2$

horizontal " : $y = 1$

y-int: $\frac{3}{2}$ $\left(0, \frac{3}{2}\right)$

x-int: $\{3\}$

$$\frac{dy}{dx} = \frac{1(x-2)-(x-3)1}{(x-2)^2}$$

$$= \frac{1}{(x-2)^2} \qquad \frac{dy}{dx} \neq 0$$

undefined at 2