

35, 41, 51

29

$$\textcircled{21} \lim_{v \rightarrow \infty} \frac{4v^4 + 5}{(v^2 - 2)(2v^2 - 1)}$$

$$\lim_{v \rightarrow \infty} \frac{4v^4 \text{ wavy}}{2v^4 \text{ wavy}}$$

$$\frac{4}{2} = \boxed{2}$$

KRASEANOLOGY

$\lim_{x \rightarrow \infty}$

HIGHER DEGREE

TOP  $\infty$

SAME COEFF.

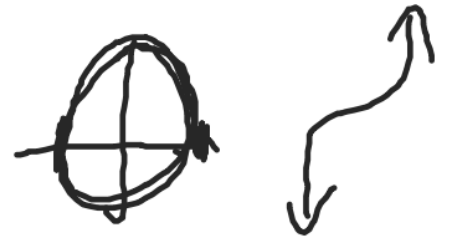
BOTTOM 0

29

$$\lim_{x \rightarrow \infty} \frac{x + x^3 + x^5}{1 - x^2 + x^4} = \infty$$

(35)

$$\lim_{x \rightarrow \infty} e^{-2x} \cos x = ?$$



$$-1 \leq \cos x \leq 1$$

$$-e^{-2x} \leq e^{-2x} \cos x \leq e^{-2x}$$

$$\lim_{x \rightarrow \infty} (-e^{-2x}) = 0$$

$$\lim_{x \rightarrow \infty} e^{-2x} = 0$$

$$\lim_{x \rightarrow \infty} e^{-2x} \cos x = 0$$

By the Squeeze Th.

41

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

$$\lim_{x \rightarrow \infty} \frac{2x^2 + x - 1}{x^2 + x - 2} = 2$$

$$Y = 2$$

HOR ASYM

VER ASYM @

$$\begin{aligned} X &= -2 \\ X &= 1 \end{aligned}$$

51

$$y = (3-x)(1+x)^2(1-x)^4$$

- + + = -  
x-INT: x=1  
x=-1  
x=3

