And assume by contradiction  $170 \Rightarrow \frac{7}{x} - \frac{1}{x^2} + \frac{1}{x^3} \leq 0.$ 50,  $\frac{7x^2 - X + 1}{\sqrt{3}} \leq 0$  $7x^{2}-X+1>0-0+1$   $7x^{2}-X+1>1 \quad 6nd$   $x^{3}>0$ But x20 30 50 7x2-X+1 78,

contradiction.

Finally,

 $\lim_{x\to\infty} \frac{7}{x} \frac{1}{x^2} + \frac{1}{x^3}$ 

 $= \lim_{x \to 0^+} (x - x^2 + x^3)$ 

= 0 Therefore, the theorem proven at the beginning applies, and so 1:1 x3+4x-7 = 00.

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contradiction.
Finally,

1im 7 1 1 1 X3

=  $\lim_{x \to 0^+} (x - x^2 + x^3)$ 

= 0

Therefore, the theorem proven at the beginning applies, and Sc 1:m  $\frac{x^3+4x-7}{7x^2-x+1}=\infty$ .

0 = x = xx = x = 1+8