

Theory Of Equations

Polynomials

Horner's Method Of Synthetic Division

Use horner's method to find quotient

And Remainder when

$x^5 - 4x^4 - 7x^3 + 11x - 13$ is divide by $x-5$.

Sol.

$$x-5=0$$

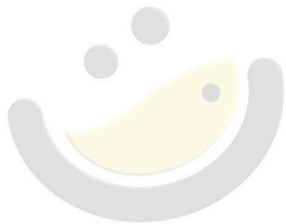
$$\underline{x=5.}$$

5	1	-4	-7	0	11	-13
		5	5	-10	-50	-195
	1	1	-2	-10	-39	-208

Remainder
=

Quotient :

$$x^4 + x^3 - 2x^2 - 10x - 39$$



OMG { MATHS }

The poetry of logical ideas

②

Use Horner's method to find the
Quotient and Remainder

When $6x^4 + 11x^3 + 13x^2 - 3x + 274$

divide by $3x + 4$.

$$3x + 4 = 0$$

$$x = -4/3.$$

Sol.



$-\frac{4}{3}$	6	11	13	-3	27
		-8	-4	-12	20
	6	3	9	-15	47

Remainder =

Quotient

$$\frac{6x^3 + 3x^2 + 9x - 15}{3}$$

$$\underline{\underline{2x^3 + x^2 + 3x - 5}}$$