

# FACTORISATION OF POLYNOMIALS

Finding the factors of polynomials.

those no. that completely divide another number.

**Factors** :-

$$32 \div 2 = 0$$

Remainder

↓  
factor of  
32

# HOW TO FIND FACTORS OF A POLYNOMIAL

\* Factors of different types of polynomials

TYPES OF POLYNOMIALS	Degree	NO. OF FACTORS
Linear Polynomial	1	1
Quadratic Polynomial	2	2
Cubic Polynomial	3	3

(Ex)

→

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

Degree

3

No. of factors

3

↓

$$4t^5 - 3t^2 + 3x^6 - 4$$

6

6

↓

$$9^4 + 3y^3 - 4z^2$$

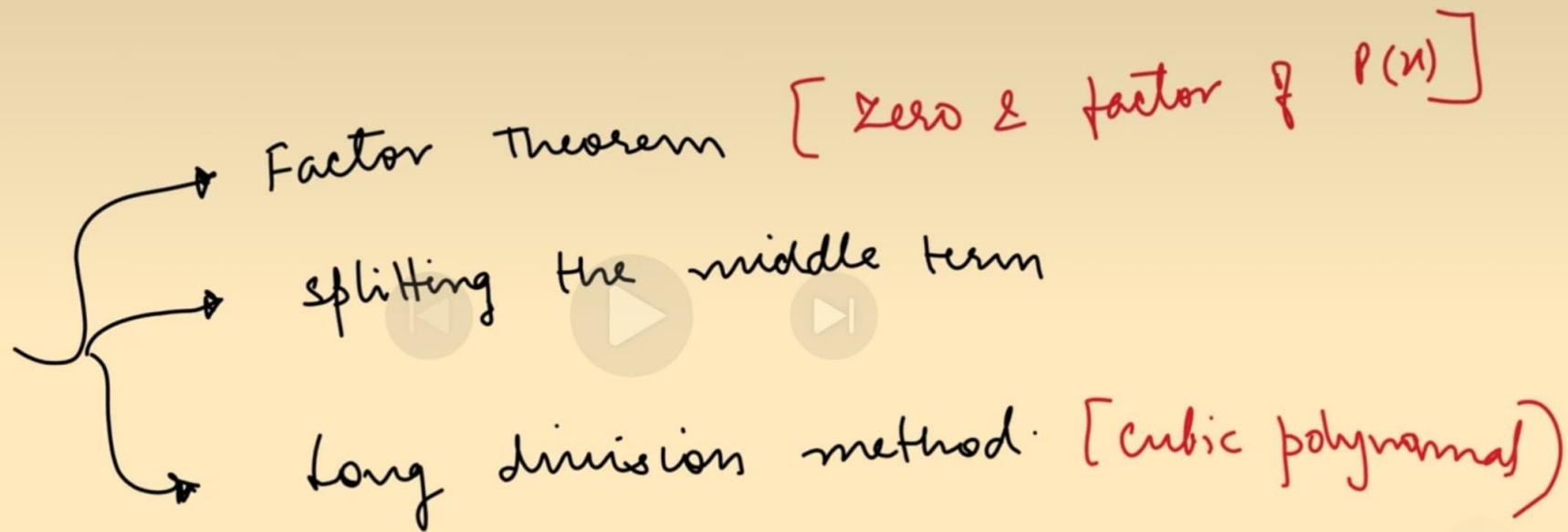
3

3

↓

$$(x+1)(x-1)$$

# \* Different methods of finding factors of a polynomial



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More videos



# FACTOR THEOREM

[R/ship b/w the factor & zero of a polynomial]

↳ For a polynomial  $P(x)$

$(x-a)$  will be a factor  
if  
 $P(a) = 0$

Given,  $a$  is any real number

OR

$P(a)$  will be equal to 0  
if  
 $(x-a)$  is a factor

$P(x)$ , if  $P(a) = 0$ ,  
 $a \rightarrow$  zero of polynomial  
factor  $\rightarrow (x-a)$

if  $(x-a)$  is a factor [Given]  
 $P(a) \rightarrow$  zero