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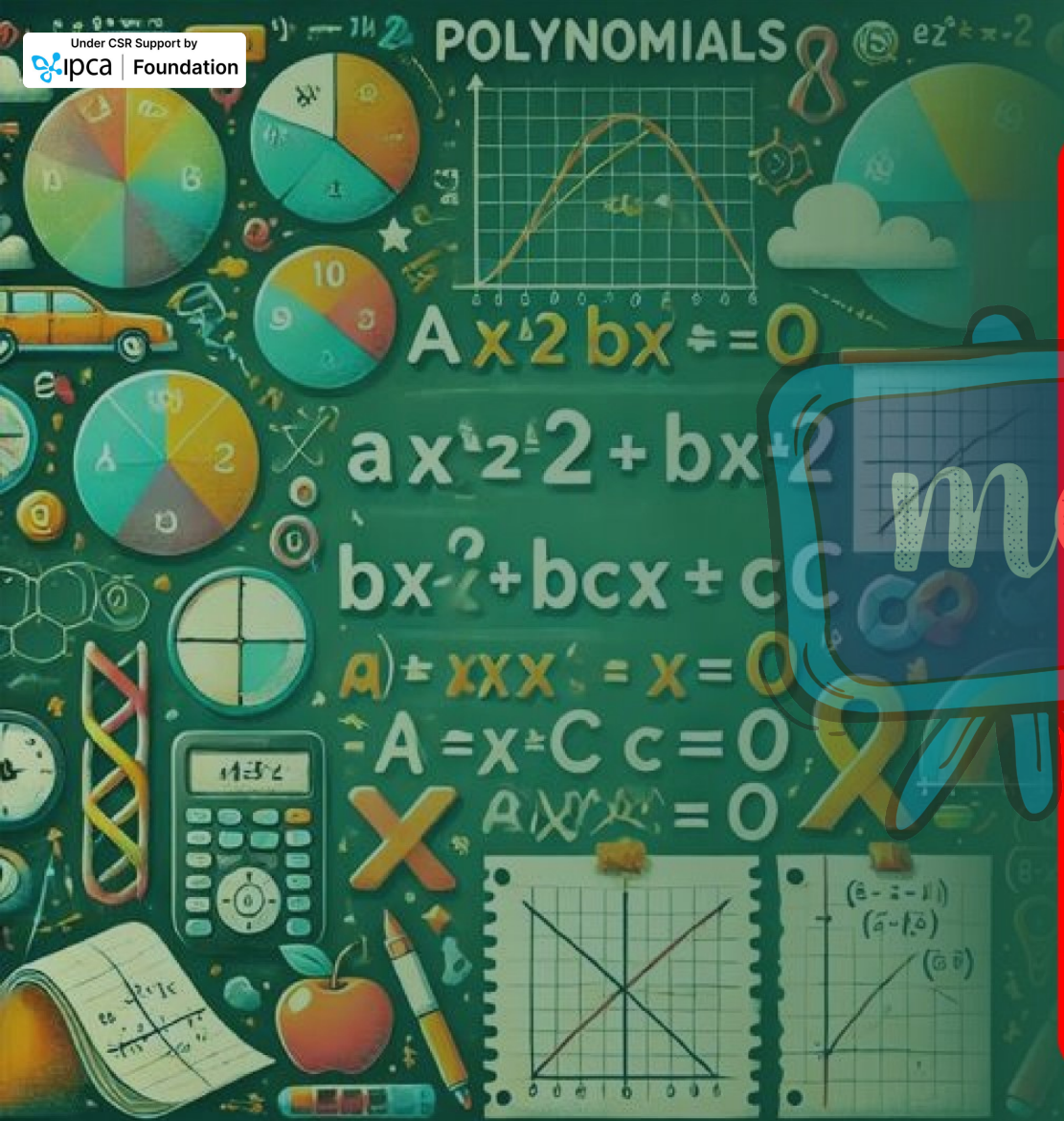

CLASS – 9

MATHS

Chapter - 2

Polynomials

Part – 3

Exercise 2.1

Vikas Saini

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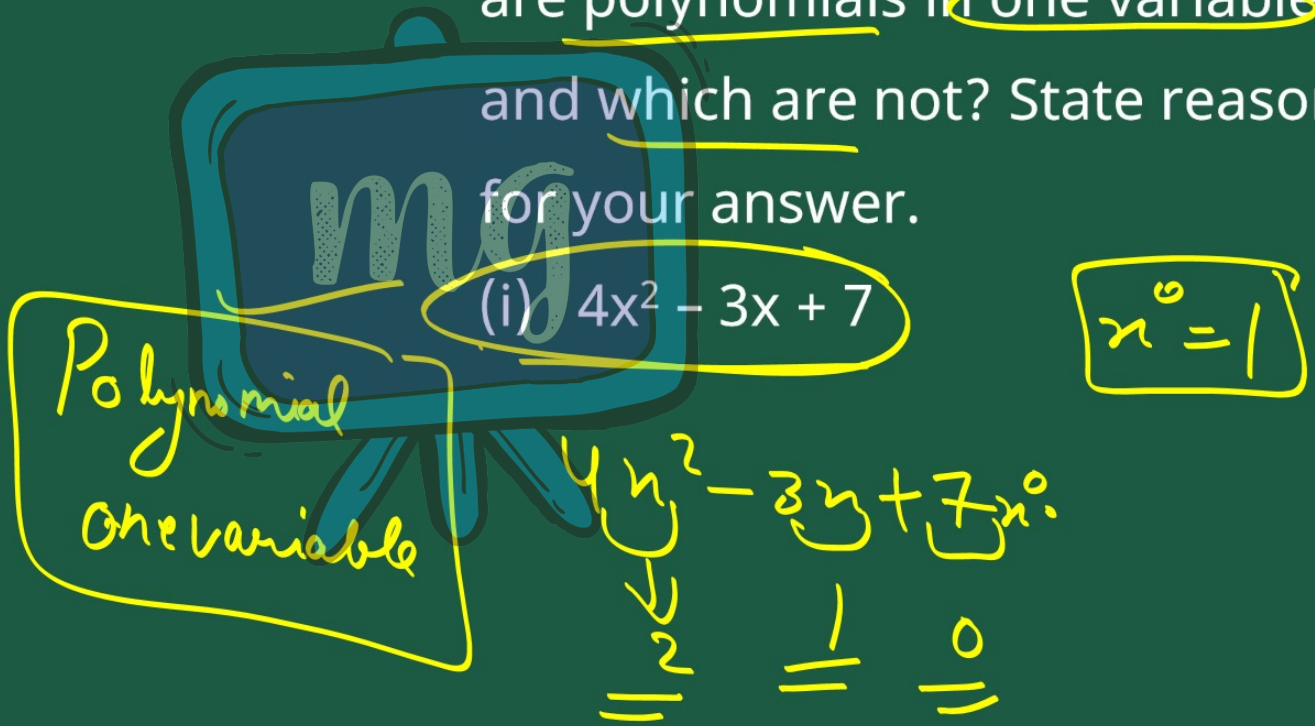
1. Which of the following expressions are polynomials in one variable and which are not? State reasons for your answer.

(i) $4x^2 - 3x + 7$



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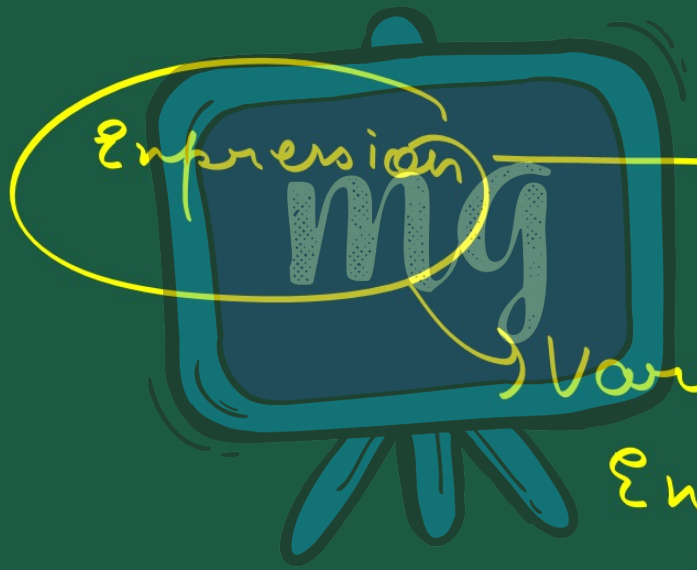

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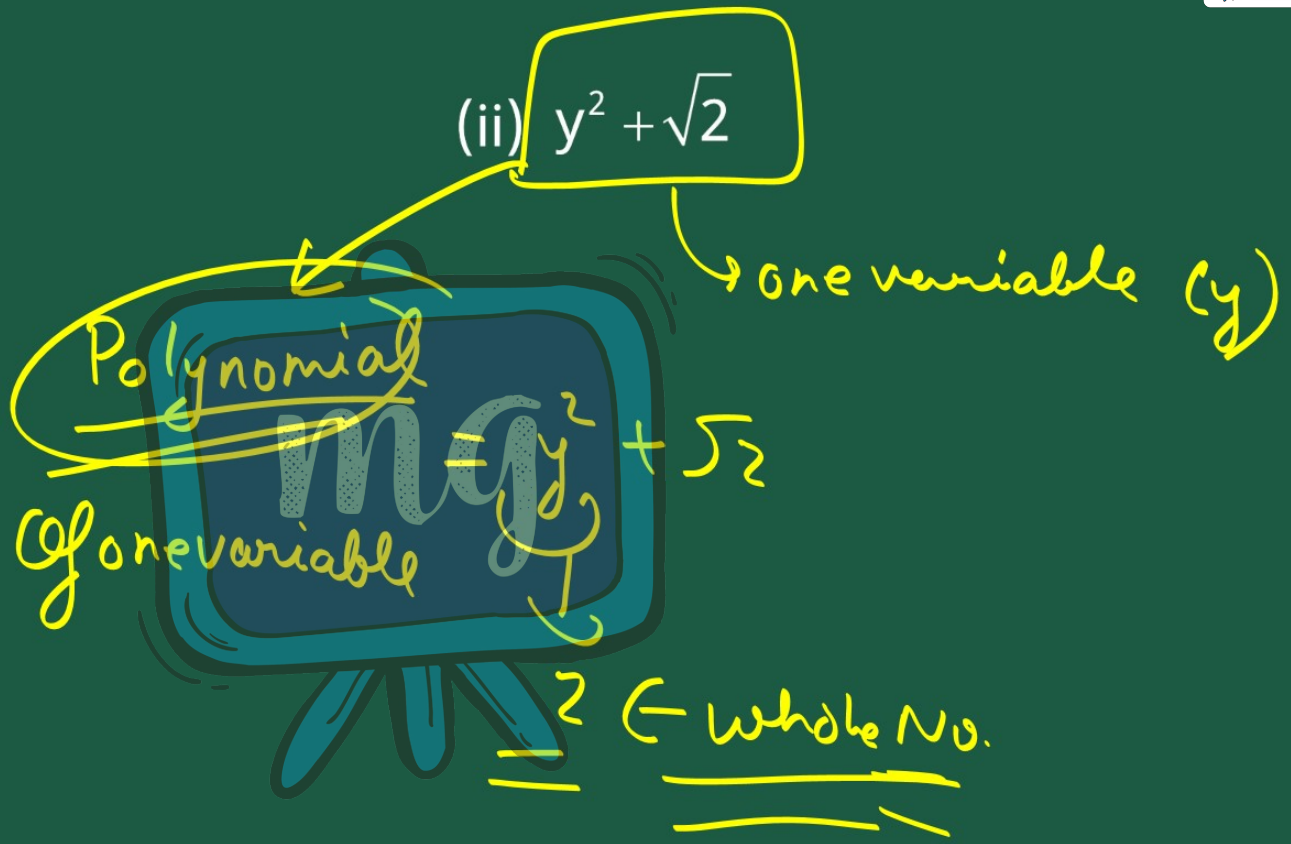

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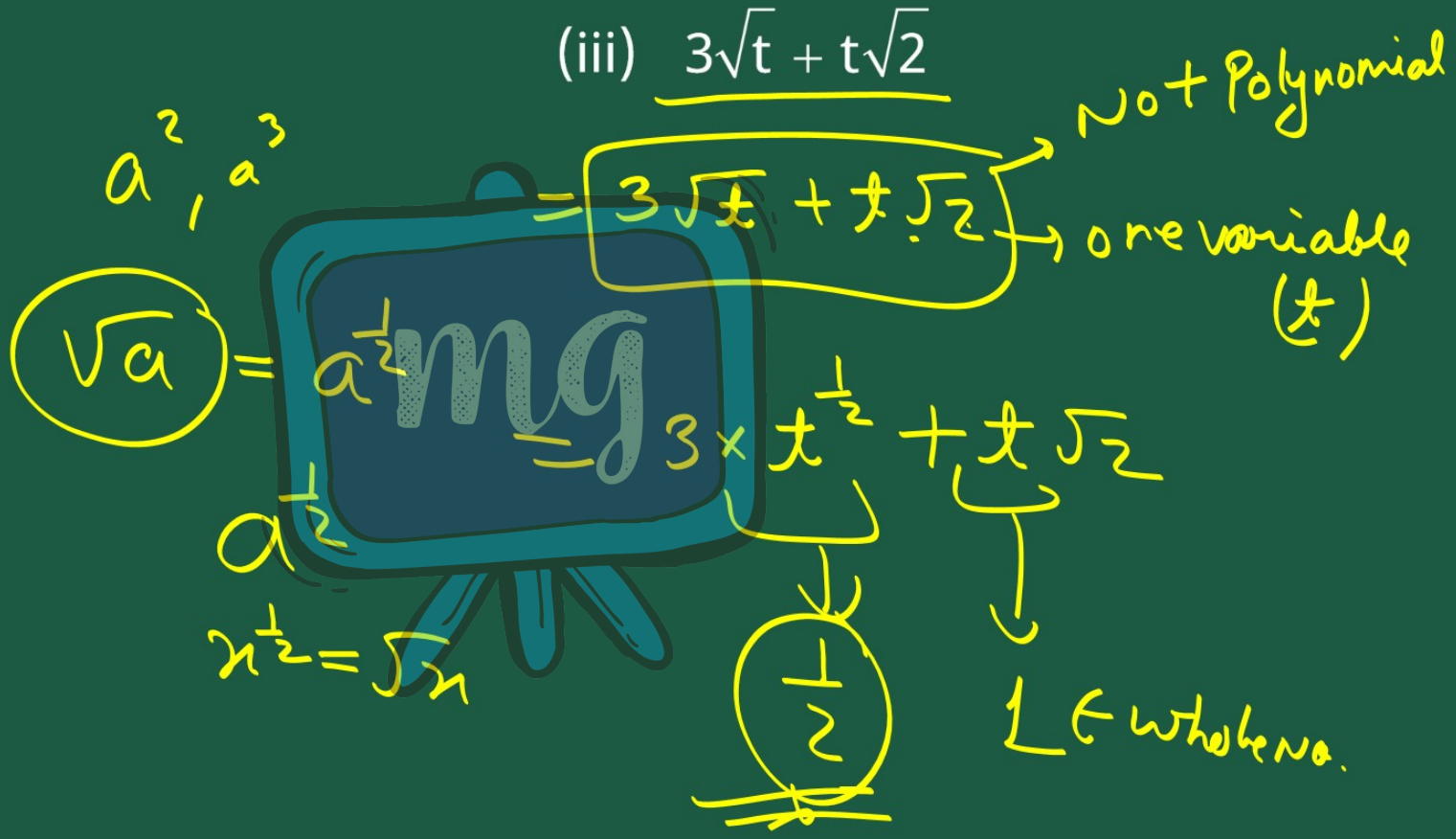

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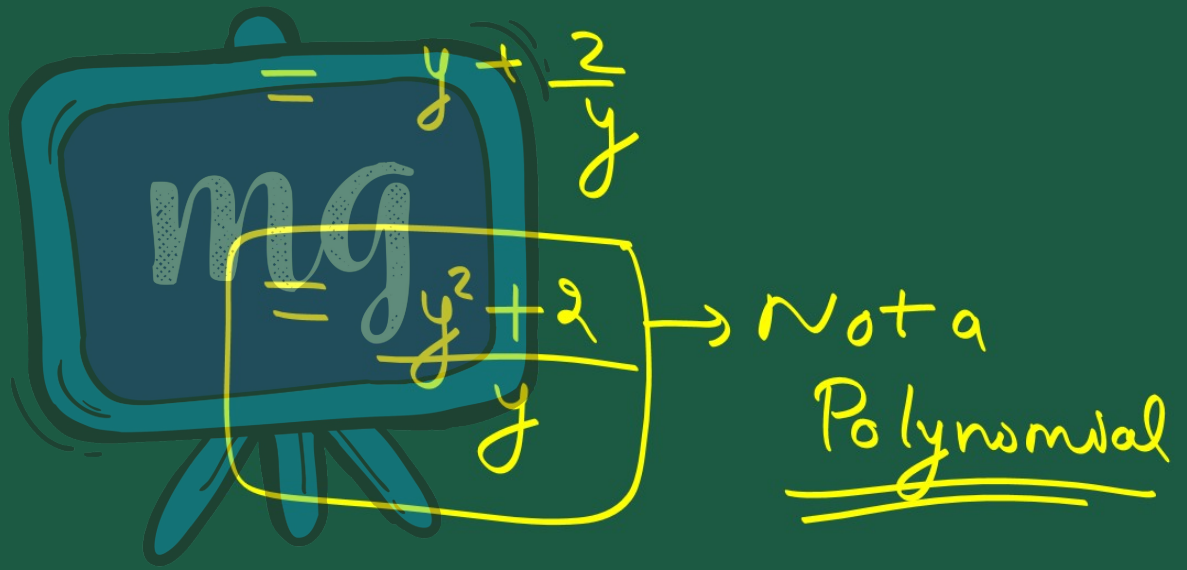
(iv) $y+\frac{2}{y}$



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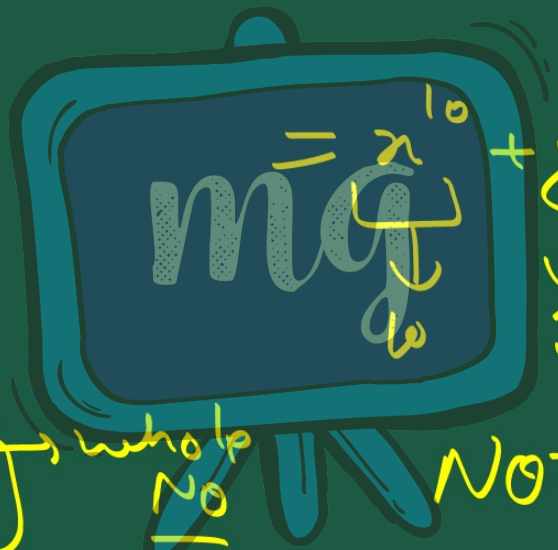
(v) $x^{10} + y^3 + t^{50}$ → Polynomial

= → 3 Variable (x, y, z)



$= x^{10} + y^3 + t^{50}$

$= x^{10} + y^3 + z^{50}$

10, 3, 50 → whole

No

Not a Polynomial of one Variable

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2. Write the coefficients of x^2 in each of the following

(i) $2 + x^2 + x$

$= 2 + x^2 + x$ → Coefficient of x^2 $= 1$

$= 2 + 1x^2 + x$

Coefficient

(ii) $2 - x^2 + x^3$

$= 2 - x^2 + x^3$

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

Coefficient of $x^2 = -1$

x^2

$= 1x^2$

$ax^n = a$

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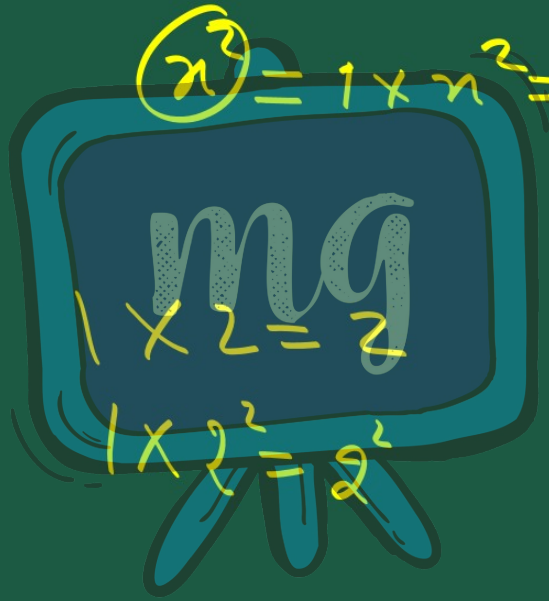
$x^3 = 1 \times x^2 = 1x^2$



$1 \times 2 = 2$

$1 \times 2^2 = 2^2$

$1 \times x = x$

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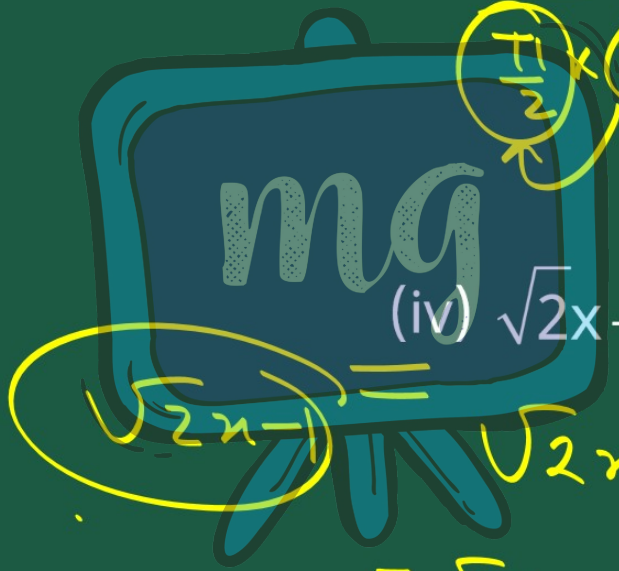

(iii) $\frac{\pi}{2}x^2 + x$

$\frac{\pi}{2} \times x^2 + x$

→ coefficient = $\frac{\pi}{2}$

(iv) $\sqrt{2x-1}$

$= \sqrt{2x-1}$

$\sqrt{2x-1} + 0$

$= \sqrt{2x-1} + 0 \times x^2$

→ coefficient → 0

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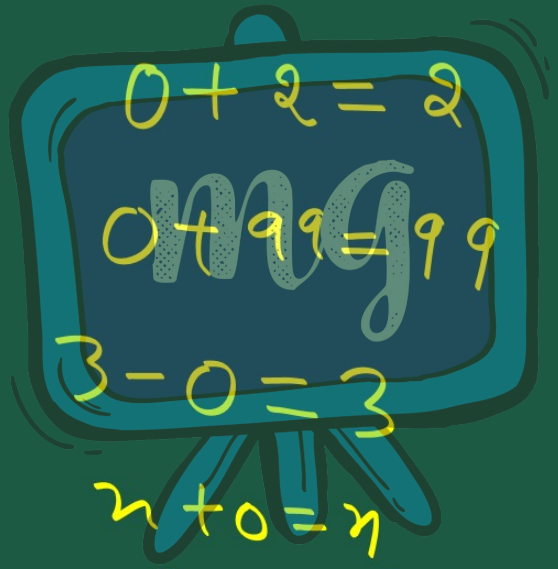

$2 \times 0 = 0$

$99 \times 0 = 0$

$x \times 0 = 0$

$x^2 \times 0 = 0$

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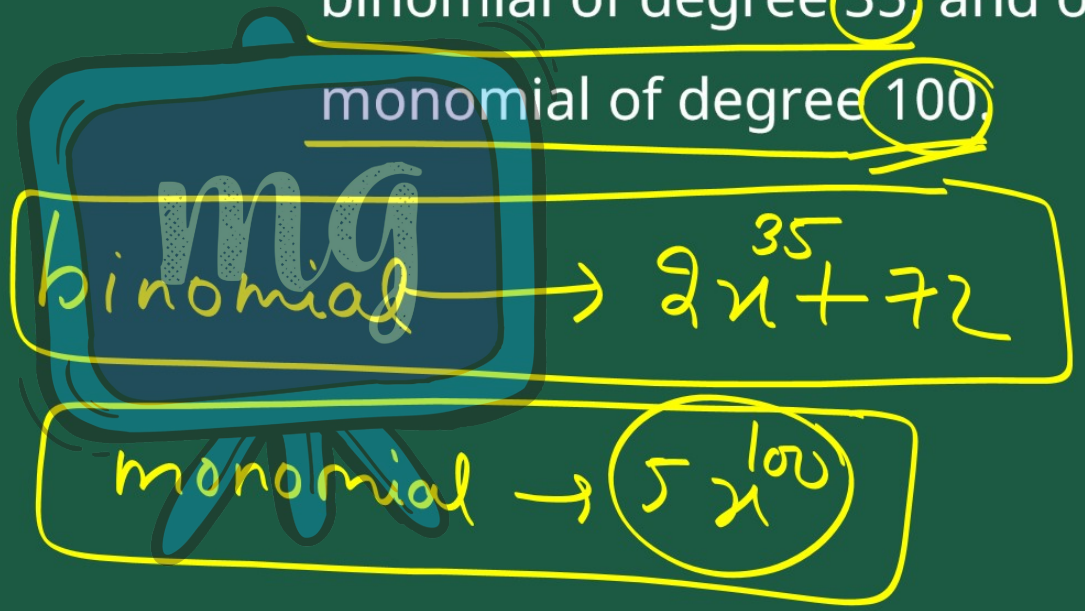
3. Give one example each of a binomial of degree 35, and of a monomial of degree 100.



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4. Write the degree of each of the following polynomials:

(i) $5x^3 + 4x^2 + 7x$

degree → 3

3 2 1

$x = x^1$

(ii) $4 - y^2$ = $4 \times y^0 - y^2$

$x^0 = 1$

$4 \times 1 = 4$

0 2

degree → 2

0 2

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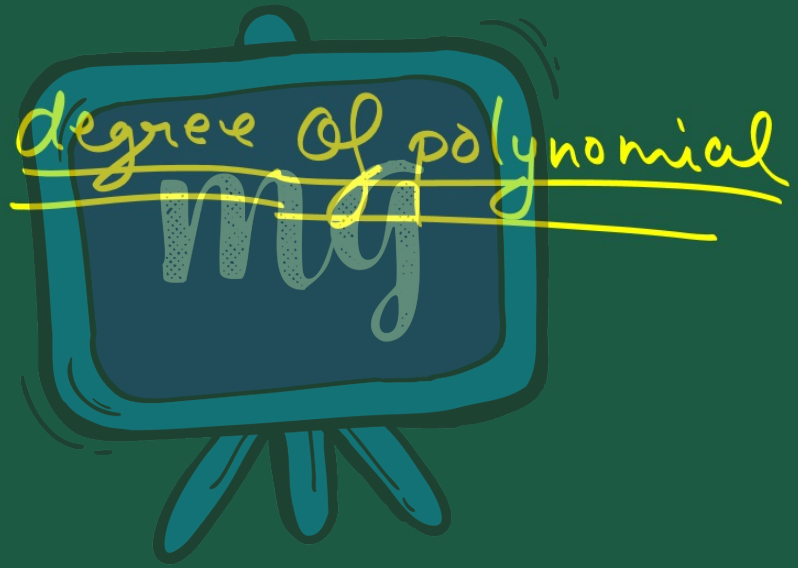

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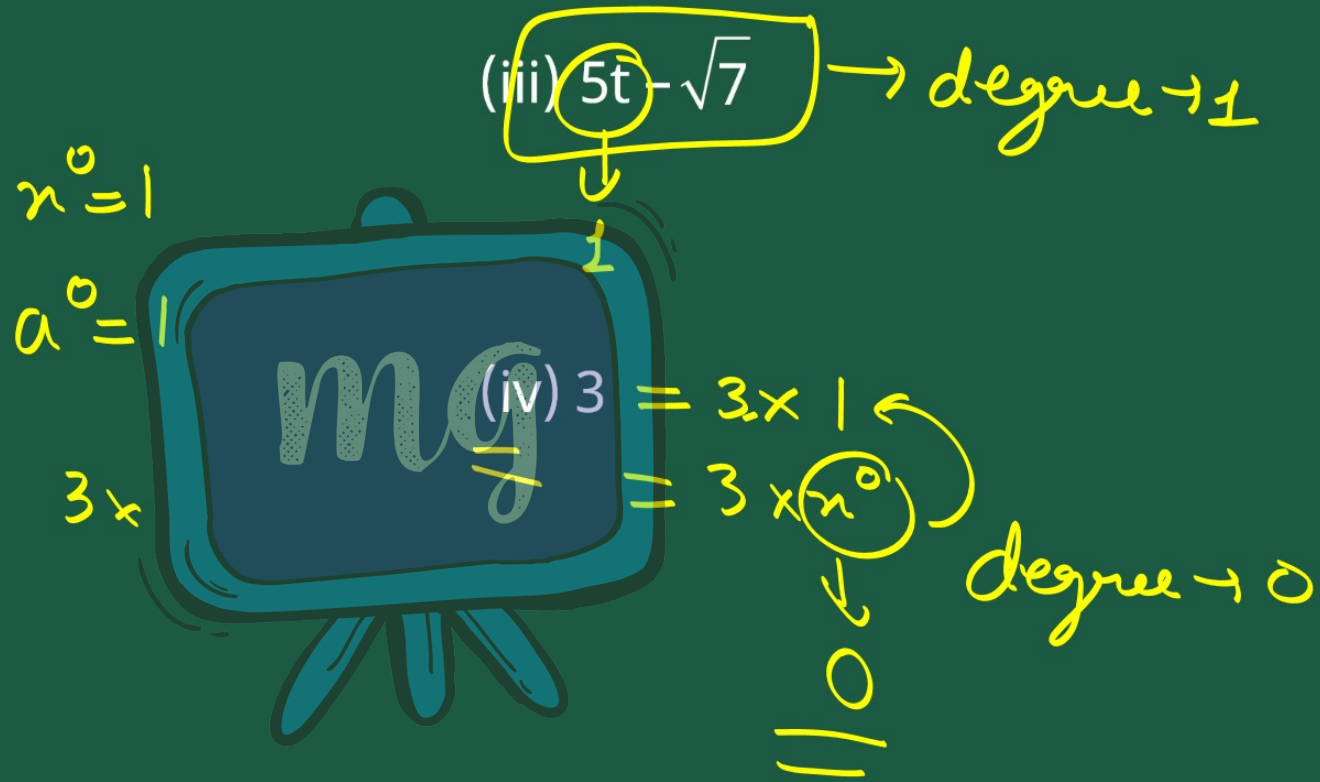

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5. Classify the following as linear, quadratic and cubic polynomials:

	degree
Linear	1
quadratic	2
Cubic	3

(i) $x^2 + x$

2 → degree

quadratic

(ii) $x - x^3$

3 → degree

Cubic

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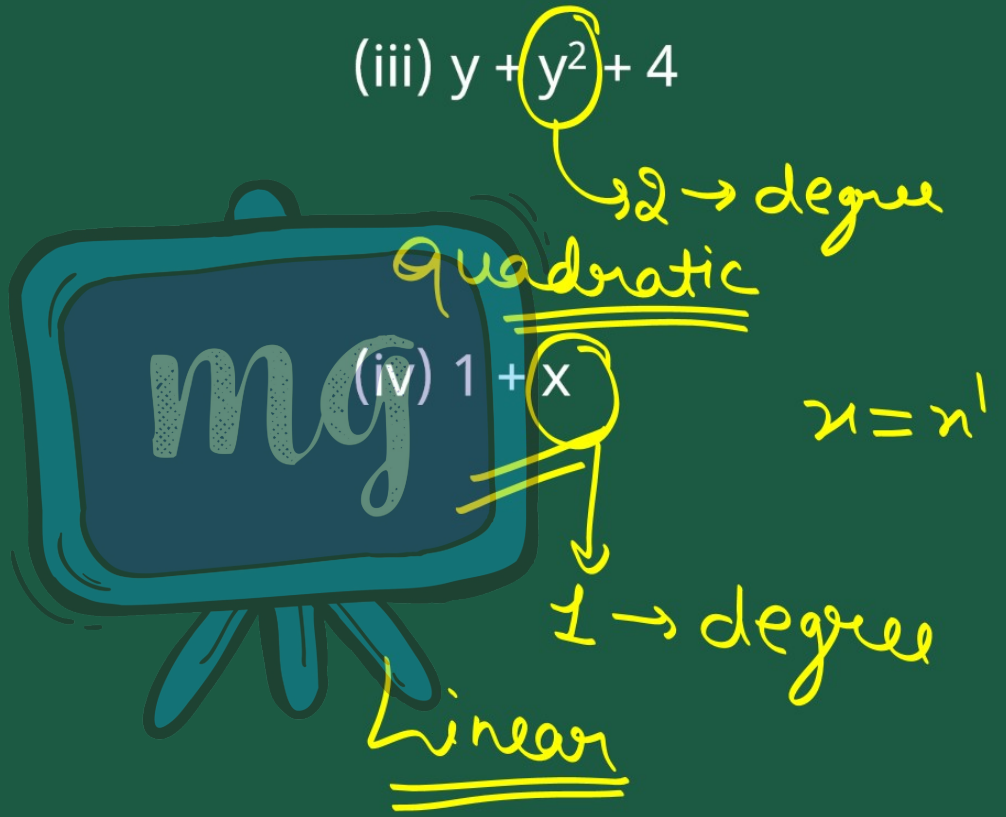

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