Factorisation of Polynomials Ex 6.1 Q4

Answer:

(i) $2x + x^2 + 4$

The degree of the polynomial is 2. It is quadratic in x.

So, it is quadratic polynomial.

(ii) $3x - 2$

The degree of the polynomial is 1. It is a linear polynomial in x.

(iii) $2x + 2^2$

The degree of the polynomial is 1.

It is linear a polynomial in x.

(iv) $3y$

The degree of the polynomial is 1. It is linear in y.

(v) $t^2 + 1$

The degree of the polynomial is 2. It is quadratic polynomial in t.

(vi) $7t^4 + 4t^3 + 3t - 2$

The degree of the polynomial is 4. Therefore, it is bi-quadratic polynomial in t.

Factorisation of Polynomials Ex 6.1 Q5

Answer:

(i) $x^2 - xy + 7y^2$

Here, x and y are two variables.

So, it is polynomial in two variables.

(ii) $x^2 - 2tx + 7t^2 - x + t$

Here, x and t are two variables.

So, it is polynomial in two variables.

(iii) $t^3 - 3t^2 + 4t - 5$

Here, only t is variable.

So, it is polynomial in one variable.

(iv) $xy + yz + zx$

Here, x, y and z are three variables

So, it is polynomial in three variables.

Factorisation of Polynomials Ex 6.1 Q6

Answer :

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

It is cubic in x, so, it is cubic polynomial in x variable.

(ii) $g(x) = 2x^3 - 3x^2 + \sqrt{x} - 1$

Here, exponent of x in $\sqrt{x}$ is not a positive integer, so, it is not a polynomial.

(iii) $p(x) = \dfrac{2}{3}x^2 - \dfrac{7}{4}2 + 9$

It is a quadratic polynomial.

(iv) $q(x) = 2x^2 - 3x + 4x + 2$

Here, exponent of x in $\dfrac{4}{x}$ is not a positive integer. So it is not a polynomial.

(v) $h(x) = x^4 - x^{3/2} + x - 1$

Here, exponent of x in $x^{3/2}$ is not a positive integer. So, it is not a polynomial.

(vi) $f(x) = 2 + \dfrac{3}{x} + 4x$

Here, exponent of x in $\dfrac{3}{x}$ is not a positive integer, so, it not a polynomial.

Factorisation of Polynomials Ex 6.1 Q7

Answer :

(i) $f(x) = 0$

The given expression is a Constant polynomial as there is no variable term in it.

(ii) $g(x) = 2x^3 - 7x + 4$

The given expression is Cubic polynomial as the highest exponent of x is 3.

(iii) $h(x) = -3x + \dfrac{1}{2}$

The given expression is linear polynomial as the highest exponent of x is 1.

(iv) $p(x) = 2x^2 - x + 4$

The given expression is Quadratic polynomial as the highest exponent of x is 2.

(v) $g(x) = 4x + 3$

The given polynomial is an linear polynomial as the highest exponent of x is 1.

(vi) $r(x) = 3x^3 + 4x^2 + 5x - 7$

The given polynomial is Cubic polynomial as the highest exponent of x is 3.

********** END *********