

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

It is a polynomial in one variable

\therefore it is of the form $ax^2 + bx + c$ where a, b, c are real numbers and $a \neq 0$.

(ii) $y^2 + \sqrt{2}$

It is a polynomial

(iii) $3\sqrt{t} + t\sqrt{2}$ not a poly.

(iv) $y + \frac{2}{y}$ not a poly.

(v) $x^{10} + y^3 + t^{50}$ not a poly. in one variable.

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

coeff. of $x^2 = 1$

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

coeff. of $x^2 = -1$

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

coeff. of $x^2 = \frac{\pi}{2}$

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

coeff. of $x^2 = 0$

3(i) $5x^{35} + 16$

(ii) $4x^{100}$

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

degree 3

(ii) $4 - y^2$

degree 2

4(iii) $5t - \sqrt{7}$

degree 1

4(iv) 3

degree 0

5(i) $x^2 + x$

quadratic polynomial

(ii) $x - x^3$

cubic polynomial

(iii) $y + y^2 + 4$

quadratic polynomial

(iv) $1 + x$

linear polynomial

(v) $3t$

linear poly.

(vi) x^2

quadratic poly.

(vii) $7x^3$

cubic polynomial