ex 2.3 IX exemplar

(1) (i) x^2+x+1
poly. in one var.

(ii) y^3-5y
poly in one var.

(iii) $xy+yz+zx$
poly in three var.

(iv) $x^2-2xy+y^2+1$
poly in two var.

2. (i) $2x-1$ degree 1

(ii) -10 degree 0

(iii) $x^3-9x+3x^5$ degree 5

(iv) $y^3(1-y^4)$
$= y^3-y^7$ degree 7

3. $\frac{x^3+2x+1}{5}-\frac{7}{2}x^2-\frac{x^6}{1}$

(ii) $= \frac{x^3}{5}+\frac{2}{5}x+\frac{1}{5}-\frac{7}{2}x^2-x^6$

(i) degree : 6
(ii) coef of x^3 : $\frac{1}{5}$
(iii) coef. of x^6 : -1
| constant term: $\frac{1}{5}$

(4) (i) $\frac{\pi}{6}x+x^2-1$
coef. of x^2 is 1

(ii) $3x-5$
$= 0x^2+3x-5$
coef. of x^2 is 0

(iii) $(x-1)(3x-4)$
$= 3x^2-4x-3x+4$
coef. of x^2 is 3

(iv) $(2x-5)(2x^2-3x+1)$
$= 4x^3-6x^2+2x-10x^2+15x-5$
$= 4x^3-16x^2+17x-5$
coef. of x^2 is -16

5 (i) cubic
(ii) cubic
(iii) linear
(iv) quadratic
(v) constant
(vi) linear
(vii) cubic
(viii) quadratic
(ix) quadratic
(x) linear