# STD – 9          MATHS

## CHAPTER - 2

## polynomials

### EXERCISE – 2.1 Q : 2,3

**2. Write the coefficients of $x^2$ in each of the following:**

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

➤ The equation $2 + x^2 + x$ can be written as $2 + (1) x^2 + x$

➤ We know that, coefficient is the number which multiplies the variable.

➤ Here, the number that multiplies the variable $x^2$ is 1

∴ the coefficients of $x^2$ in $2 + x^2 + x$ is 1.

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

➤ The equation $2 - x^2 + x^3$ can be written as $2 + (-1)x^2 + x^3$.

➤ We know that, coefficient is the number (along with its sign, i.e., - or +) which multiplies the variable.

➤ Here, the number that multiplies the variable $x^2$ is -1

∴ the coefficients of $x^2$ in $2 - x^2 + x^3$ is -1.

**(iii)** $\left(\dfrac{\pi}{2}\right) x^2 + x$

➢ The equation $\left(\dfrac{\pi}{2}\right) x^2 + x$ can be written as $\left(\dfrac{\pi}{2}\right) x^2 + x$

➢ We know that, coefficient is the number (along with its sign, i.e., - or +) which multiplies the variable.

➢ Here, the number that multiplies the variable $x^2$ is $\pi/2$.

∴ the coefficients of $x^2$ in $\left(\dfrac{\pi}{2}\right) x^2 + x$ is $\dfrac{\pi}{2}$ .
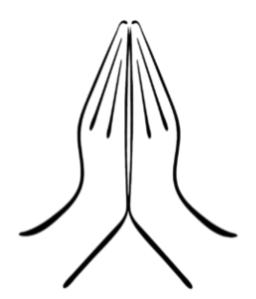
**(iii)** $\sqrt{2}x - 1$

➢ The equation $\sqrt{2}x - 1$ can be written as $0x^2 + \sqrt{2}x - 1$

[Since $0x^2$ is 0]

➢ We know that, coefficient is the number (along with its sign, i.e., - or +) which multiplies the variable.

➢ Here, the number that multiplies the variable $x^2$ is 0

∴ the coefficients of $x^2$ in $\sqrt{2}x - 1$ is 0.

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

➤ **Binomial of degree 35: A polynomial having two terms and the highest degree 35 is called a binomial of degree 35**

➤ **Eg., $3x^{35} + 5$**

➢ **Monomial of degree 100 : A polynomial having one term and the highest degree 100 is called a monomial of degree 100**

➢ **Eg., $4x^{100}$**