

Exercise 2B

Question 5: (i) p(x) = x - 4Then, p(4) = 4 - 4 = 0 $\Rightarrow 4$ is a zero of the polynomial p(x).

(ii) p(x) = x - 3Then, p(-3) = -3 - 3 = -6 $\Rightarrow -3$ is not a zero of the polynomial p(x).

(iii) p(y) = 2y + 1 $p\left(-\frac{1}{2}\right) = 2\left(\frac{-1}{2}\right) + 1 = 0$ Then, $\Rightarrow \frac{-1}{2}$ is a zero of the polynomial p(y).

(iv) p(x) = 2 - 5x $p(\frac{2}{5}) = 2 - 5(\frac{2}{5}) = 2 - 2 = 0$ Then, $\Rightarrow \frac{2}{5}$ is a zero of the polynomial p(x).

(v) p(x) = (x - 1) (x - 2)Then, p(1) = (1 - 1) (1 - 2) = 0 - 1 = 0 $\Rightarrow 1$ is a zero of the polynomial p(x). Also, p(2) = (2 - 1)(2 - 2) = 10 = 0 $\Rightarrow 2$ is a zero of the polynomial p(x). Hence, 1 and 2 are the zeroes of the polynomial p(x).

(vi) $p(x) = x^2 - 3x$. Then, $p(0) = 0^2 - 3(0) = 0$ $p(3) = (3^2) - 3(3) = 9 - 9 = 0$ $\Rightarrow 0$ and 3 are the zeroes of the polynomial p(x).

(vii) $p(x) = x^2 + x - 6$ Then, $p(2) = 2^2 + 2 - 6$ = 4 + 2 - 6 = 6 - 6 = 0 $\Rightarrow 2$ is a zero of the polynomial p(x). Also, $p(-3) = (-3)^2 - 3 - 6$ = 9 - 3 - 6 = 0 $\Rightarrow -3$ is a zero of the polynomial p(x). Hence, 2 and -3 are the zeroes of the polynomial p(x).