

Chapter 1 – polynomials

Answers

1. Polynomial of degree 1
2. $a_0x^n + a_1x^{n-1} + a_2x^{n-2} + \dots + a_{n-2}x^2 + a_{n-1}x + a_n$ where a_0, a_1, \dots, a_n are real numbers and $a_0 \neq 0$
3. Yes, of the form $ax^2 + bx + c$, where a, b, c are real numbers and $a \neq 0$
4. No, because the power of variable(x) is not a non negative integer.
5. $ax^5 + bx^4 + cx^3 + dx^2 + ex + f$ where a, b, c, d, e are real nos and $a \neq 0$
6. is a real no. which when substituted for x makes value of polynomial zero.
7. 3
8. $x^3 + x^2 - x + 5$ or $5 - x + x^2 + x^3$
9. $8(x^2 + \frac{1}{8}x + \frac{1}{4}) = 8x^2 + x + 2$
10. 3
11. 4, - 4
12. $(x + \frac{\sqrt{3}}{5})(x - \frac{\sqrt{3}}{5}) 25$
 $= 25 \frac{(5x + \sqrt{3})(5x - \sqrt{3})}{25}$
 $= 25x^2 - 3$

Infinitely many