Demo School

Second Worksheet

Class: Class 10 | Subject: Mathematics

Chapters: 2. Polynomials

Section A

1. One zero of x^2 - 3x - 10 is:

A) 5 B) -2 C) 3 D) 1

2. Zeroes of ax^2 + bx + c = 0 exist when:

A) b^2-4ac>=0 B) b^2-4ac>0 C) 2a>=0 D) b>=0

3. Degree of 3x^4 is:

A) 1 B) 2 C) 4 D) 0

4. Which is a cubic polynomial?

A) x^2+1 B) x^3+2 C) x+5 D) 5

Section B

5. What is a quadratic polynomial? Give one example.

6. How does Fig. 2.6 support cubic polynomial zero interpretation?

7. Find p(3) for p(x)=3x^3-5x^2-11x-3.

8. Find the zero of linear polynomial 2x + 3.

Section C

9. A graph of a quadratic polynomial does not touch the x-axis. Explain and give an example.

10. Show that 2 and -3 are zeroes of x^3 + x^2 - 8x - 6 and verify cubic relationships.

11. Find zeroes of 4x^2 - 1 and verify relationships.

12. Find the zeroes of 2x^2 - 7x + 3 and verify sum and product relationship.

Section D

13. Verify that x = 2 is a zero of the polynomial $x^3 - 8$.

Section E

14. A student sees polynomial x^2+5 never touching x-axis.

(a) Explain why polynomial has no real root.

15. Fuel system governed by F(x)=x^2-10x+25.

(a) Find zero fuel state and special nature.

16. Weather model polynomial W(x)=x^2+4x+9 recorded.

(a) Comment on zero rainfall possibility.

17. A drone flight path: h(x)=x^2-5x+6.

(a) Find landing points on ground level.

*** End of Worksheet ***