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# Class 10 Maths – Polynomials – Topic: Zeros of Polynomial & Relationship between Coefficients and Zeros (Worksheet)

ALPHA CLASSES DEOBAND | Session 2026–27 | CBSE Board Pattern

Name: \_\_\_\_\_ Roll No.: \_\_\_\_\_ Date: \_\_\_\_\_

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## Level 1 – Basic (Build Confidence)

- Q1. State whether  $3x^2 - \sqrt{5}x + 8$  is a polynomial or not. If yes, write its degree and type.
- Q2. Check by substitution whether  $x = -1$  is a zero of  $p(x) = x^2 + 3x + 2$ .
- Q3. Write the coefficient of  $x^2$  and the constant term in  $7x^2 - 4x + 11$ .
- Q4. Write the general form of a quadratic polynomial and state what each letter represents.
- Q5. Find the sum and product of zeroes of  $p(x) = x^2 - 9x + 20$ .
- Q6. Form a quadratic polynomial whose zeroes are 5 and  $-2$ .
- Q7. If one zero of a quadratic polynomial is 0 and the product of zeroes is also 0, what can you say about the other zero?
- Q8. A student says  $x^{-2} + 3x - 1$  is a polynomial. Is this correct? Give one reason.
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## Level 2 – Standard / Exam-Oriented

- Q9. Find the sum and product of zeroes of  $4x^2 - 12x + 9$ . What do these values tell you about the nature of the zeroes?
- Q10. Form a quadratic polynomial whose zeroes are  $\frac{3}{2}$  and  $\frac{-1}{2}$ .
- Q11. A student writes the sum of zeroes of  $2x^2 + 5x - 3$  as  $\frac{5}{2}$ . Identify the mistake and give the correct answer.
- Q12. Check whether 1 and  $-6$  are zeroes of  $p(x) = x^2 + 5x - 6$ . Verify using both substitution and the coefficient relations.
- Q13. Form a quadratic polynomial whose sum of zeroes is 0 and product of zeroes is  $-25$ .

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**Q14.** For  $p(x) = 6x^2 + x - 2$ , without finding the actual zeroes, find their sum and product. State whether the zeroes have the same sign or different signs. Give a reason.

**Q15.** If the zeroes of a quadratic polynomial are equal in magnitude but opposite in sign, what is the value of the coefficient of  $x$ ? Justify your answer.

**Q16.** Write two different quadratic polynomials both having 3 as one of their zeroes.

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*Do not write solutions on this sheet. Use a separate notebook for working.*

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Prepared for ALPHA CLASSES – Class 10 Maths (CBSE) – Chapter: Polynomials, Topic: Zeros of Polynomial & Relationship between Coefficients and Zeros

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