

NCERT Solutions Class 9 Maths

Chapter 2: Polynomials

EXERCISE 2.4

Document Information:

Class: 9 | Subject: Mathematics | Chapter: 2 | Exercise: 2.4

Total Questions: 16 | Academic Year: 2025-26

Source: www.ncertbooks.net | Generated: February 21, 2026

Quick Summary: In NCERT Solutions Class 9 Maths Chapter 2 Exercise 2.4, students learn advanced factorization techniques using the Remainder Theorem and Factor Theorem. This exercise covers algebraic identities and polynomial factorization methods that are essential for solving complex polynomial problems in CBSE Class 9 exams and higher mathematics.

Key Takeaways:

- Master the expanded form of $(a + b + c)^2 = a^2 + b^2 + c^2 + 2ab + 2bc + 2ca$ for three-variable expressions
- Apply the Factor Theorem: if $p(a) = 0$, then $(x - a)$ is a factor of polynomial $p(x)$
- Use standard algebraic identities like $a^3 + b^3 = (a + b)(a^2 - ab + b^2)$ to factorize complex polynomials efficiently
- Recognize patterns in polynomial expressions to choose the most appropriate factorization method for CBSE exam problems

www.ncertbooks.net

Question 1

QUESTION

Use suitable identities to find the following products:

(i) $(x + 4)(x + 10)$

(ii) $(x + 8)(x - 10)$

(iii) $(3x + 4)(3x - 5)$

(iv) $(y^2 + \frac{3}{2})(y^2 - \frac{3}{2})$

(v) $(3 - 2x)(3 + 2x)$

SOLUTION

This question tests our ability to recognize and apply standard algebraic identities to simplify expressions and find products.

(i)

Step 1: Recognize the applicable identity

We can use the identity:

Step 2: Apply the identity

Here, and . Substituting these values into the identity, we get:

Step 3: Simplify

Final Answer:

(ii)

Step 1: Recognize the applicable identity

Again, we use the identity:

Step 2: Apply the identity

Here, and . Substituting these values into the identity, we get:

Step 3: Simplify

Final Answer:

(iii)

Step 1: Recognize the applicable identity

Let . Then the expression becomes . We can use the identity:

Step 2: Apply the identity

Here, and . Substituting these values into the identity, we get:

Step 3: Simplify and substitute back

. Now substitute :

Final Answer:

(iv)

Step 1: Recognize the applicable identity

We can use the identity:

Step 2: Apply the identity

Here, and . Substituting these values into the identity, we get:

Step 3: Simplify

Final Answer:

(v)

Step 1: Recognize the applicable identity

We can use the identity:

Step 2: Apply the identity

Here, and . Substituting these values into the identity, we get:

Step 3: Simplify

Final Answer:

ANSWER

(i) $x^2 + 14x + 40$

(ii) $x^2 - 2x - 80$

(iii) $9x^2 - 3x - 20$

(iv) $y^4 - \frac{9}{4}$

(v) $9 - 4x^2$

Question 2

QUESTION

Evaluate the following products without multiplying directly:

(i) 103×107

(ii) 95×96

(iii) 104×96

SOLUTION

This question tests our ability to use algebraic identities to simplify multiplication, avoiding direct calculation.

(i) 103×107

Step 1: Express the numbers as a sum

We can write 103 and 107 as:

Step 2: Apply the identity

Here, , , and . Substituting these values into the identity:

Step 3: Simplify

Final Answer: 11021

(ii) 95×96

Step 1: Express the numbers as a difference

We can write 95 and 96 as:

Step 2: Apply the identity

Here, , , and . Substituting these values into the identity:

Step 3: Simplify

Final Answer: 9120

(iii) 104×96

Step 1: Express the numbers as a sum and a difference

We can write 104 and 96 as:

Step 2: Apply the identity

Here, and . Substituting these values into the identity:

Step 3: Simplify

Final Answer: 9984

ANSWER

(i) 11021

(ii) 9120

(iii) 9984

www.ncertbooks.net

Question 3

QUESTION

Factorise the following using appropriate identities:

(i) $9x^2 + 6xy + y^2$

(ii) $4y^2 - 4y + 1$

(iii) $x^2 - (y^2)/(100)$

SOLUTION

This question requires us to factorize the given expressions using appropriate algebraic identities. We will analyze each expression and identify which identity can be applied to factorize it.

(i)

Step 1: Recognize the pattern

Notice that the given expression resembles the form $a^2 + 2ab + b^2$, which is the expansion of $(a + b)^2$.

Step 2: Rewrite the expression in the form

We can rewrite the expression as follows:

$9x^2 + 6xy + y^2$, and

So,

Step 3: Apply the identity

Using the identity, we have:

Step 4: Write the final factorization

Answer:

(ii)

Step 1: Recognize the pattern

This expression resembles the form $a^2 - 2ab + b^2$, which is the expansion of $(a - b)^2$.

Step 2: Rewrite the expression in the form

We can rewrite the expression as follows:

$4y^2 - 4y + 1$, and

So,

Step 3: Apply the identity

Using the identity, we have:

Step 4: Write the final factorization**Answer:**

(iii)

Step 1: Recognize the pattern

This expression resembles the form $a^2 - b^2$, which is the difference of squares and can be factored as $(a + b)(a - b)$.

Step 2: Rewrite the expression in the form

We can rewrite the expression as follows:

and

So,

Step 3: Apply the identity

Using the identity, we have:

Answer:**ANSWER**

(i) $(3x + y)(3x + y)$

(ii) $(2y - 1)(2y - 1)$

(iii) $(x + \frac{y}{10})(x - \frac{y}{10})$

Question 4

QUESTION

Expand each of the following using suitable identities:

(i) $(x + 2y + 4z)^2$

(ii) $(2x - y + z)^2$

(iii) $(-2x + 3y + 2z)^2$

(iv) $(3a - 7b - c)^2$

(v) $(-2x + 5y - 3z)^2$

(vi) $\left[\frac{1}{4}a - \frac{1}{2}b + 1\right]^2$

SOLUTION

This question tests our ability to apply the identity to expand given expressions.

(i)

Step 1: Identify a , b , and c .

Here, $a = x$, $b = 2y$, and $c = 4z$.

Step 2: Apply the identity.

Step 3: Simplify.

Final Answer:

(ii)

Step 1: Identify a , b , and c .

Here, $a = 2x$, $b = -y$, and $c = z$.

Step 2: Apply the identity.

Step 3: Simplify.

Final Answer:

(iii)

Step 1: Identify a , b , and c .

Here, $a = -2x$, $b = 3y$, and $c = 2z$.

Step 2: Apply the identity.

Step 3: Simplify.

Final Answer:

(iv)

Step 1: Identify , , and .

Here, , , and .

Step 2: Apply the identity.

Step 3: Simplify.

Final Answer:

(v)

Step 1: Identify , , and .

Here, , , and .

Step 2: Apply the identity.

Step 3: Simplify.

Final Answer:

(vi)

Step 1: Identify , , and .

Here, , , and .

Step 2: Apply the identity.

Step 3: Simplify.

Final Answer:

ANSWER

(i) $x^2 + 4y^2 + 16z^2 + 4xy + 16yz + 8xz$

(ii) $4x^2 + y^2 + z^2 - 4xy - 2yz + 4xz$

(iii) $4x^2 + 9y^2 + 4z^2 - 12xy + 12yz - 8xz$

(iv) $9a^2 + 49b^2 + c^2 - 42ab + 14bc - 6ac$

(v) $4x^2 + 25y^2 + 9z^2 - 20xy - 30yz + 12xz$

(vi) $\frac{a^2}{16} + \frac{b^2}{4} + 1 - \frac{ab}{4} - b + \frac{a}{2}$

Question 5

QUESTION

Factorise:

(i) $(2x + 3y - 4z)(2x + 3y - 4z)$

(ii) $(-\sqrt{2x + y + 2\sqrt{2z}})(-\sqrt{2x + y + 2\sqrt{2z}})$

SOLUTION

This question requires us to factorize two expressions. The key here is to recognize the algebraic identities that can simplify the given expressions. For part (i), we can expand the product directly. For part (ii), we need to carefully apply the identity for the cube of a binomial.

(i) Factorize

Step 1: Recognize the expression as a square

The expression is . This is the square of a trinomial.

Step 2: Expand the square

We can expand this as follows:

Step 3: Simplify each term

Step 4: Combine the terms

Final Answer:

(ii) Factorize

Step 1: Recognize the expression as a square

The expression is . This is the square of a trinomial.

Step 2: Expand the square

We can expand this as follows:

Step 3: Simplify each term

Step 4: Combine the terms

Final Answer:

ANSWER

(i) $8x^3 + 12x^2y + 6x + 1$

(ii) $8a^3 - 27b^3 - 36a^2b + 54ab^2$

www.ncertbooks.net

Question 6

QUESTION

Write the following cubes in expanded form:

- (i) $(2x + 1)^3$
- (ii) $(2a - 3b)^3$
- (iii) $\left[\frac{3}{2}x + 1\right]^3$
- (iv) $\left[x - \frac{2}{3}y\right]^3$

SOLUTION

This question asks us to expand the given cube expressions using suitable algebraic identities.

(i) Expand

Step 1: Recall the identity for :

Step 2: Identify and in the given expression.

Here, and .

Step 3: Substitute the values of and into the identity:

Step 4: Simplify the expression:

Step 5: Rearrange the terms to get the final expanded form:

(ii) Expand

Step 1: Recall the identity for :

Step 2: Identify and in the given expression.

Here, and .

Step 3: Substitute the values of and into the identity:

Step 4: Simplify the expression:

Step 5: Rearrange the terms to get the final expanded form:

(iii) Expand

Step 1: Recall the identity for :

Step 2: Identify and in the given expression.

Here, and .

Step 3: Substitute the values of and into the identity:

Step 4: Simplify the expression:

Step 5: Rearrange the terms to get the final expanded form:

(iv) Expand

Step 1: Recall the identity for :

Step 2: Identify and in the given expression.

Here, and .

Step 3: Substitute the values of and into the identity:

Step 4: Simplify the expression:

Step 5: Rearrange the terms to get the final expanded form:

ANSWER

(i) $8x^3 + 27/8 x^3 + 27/4 x^2 + 9/2 x + 1$

(ii) $x^3 - (8)/(27)y^3 - 2x^2y + (4xy^2)/(3)$

www.ncertbooks.net

Question 7

QUESTION

Evaluate the following using suitable identities:

(i) $(99)^3$

(ii) $(102)^3$

(iii) $(998)^3$

SOLUTION

This question requires us to evaluate the cubes of numbers close to 100 or 1000 using suitable algebraic identities.

(i) Evaluate

Step 1: Choose a suitable identity

We can write 99 as . So, we can use the identity .

Here, and .

Step 2: Apply the identity

Step 3: Simplify

Final Answer:

(ii) Evaluate

Step 1: Choose a suitable identity

We can write 102 as . So, we can use the identity .

Here, and .

Step 2: Apply the identity

Step 3: Simplify

Final Answer:

(iii) Evaluate

Step 1: Choose a suitable identity

We can write 998 as . So, we can use the identity .

Here, and .

Step 2: Apply the identity

Step 3: Simplify

Final Answer:

ANSWER

(i) 970299

(ii) 1061208

(iii) 994011992

www.ncertbooks.net

Question 8

QUESTION

Factorise each of the following:

- (i) $8a^3 + b^3 + 12a^2b + 6ab^2$
- (ii) $8a^3 - b^3 - 12a^2b + 6ab^2$
- (iii) $27 - 125a^3 - 135a + 225a^2$
- (iv) $64a^3 - 27b^3 - 144a^2b + 108ab^2$
- (v) $27p^3 - \frac{1}{216} - \frac{9}{2}p^2 + \frac{1}{4}p$

SOLUTION

This question tests our ability to recognize and apply algebraic identities, specifically the identities for and . We need to manipulate the given expressions to match these forms and then factorize them.

(i)

Step 1: Recognize the pattern

We can rewrite the expression as: . This looks like the expansion of .

Step 2: Apply the identity

Here, is and is . Therefore, we can write the expression as .

Step 3: Write the factored form

Final Answer:

(ii)

Step 1: Recognize the pattern

We can rewrite the expression as: . This looks like the expansion of .

Step 2: Apply the identity

Here, is and is . Therefore, we can write the expression as .

Step 3: Write the factored form

Final Answer:

(iii)

Step 1: Recognize the pattern

We can rewrite the expression as: . This looks like the expansion of .

Step 2: Apply the identity

Here, is and is . Therefore, we can write the expression as .

Step 3: Write the factored form

Final Answer:

(iv)

Step 1: Recognize the pattern

We can rewrite the expression as: . This looks like the expansion of .

Step 2: Apply the identity

Here, is and is . Therefore, we can write the expression as .

Step 3: Write the factored form

Final Answer:

(v)

Step 1: Recognize the pattern

We can rewrite the expression as: . This looks like the expansion of .

Step 2: Apply the identity

Here, is and is . Therefore, we can write the expression as .

Step 3: Write the factored form

Final Answer:

ANSWER

(i) $(2a + b)(2a + b)(2a + b)$

(ii) $(2a - b)(2a - b)(2a - b)$

(iii) $(3 - 5a)(3 - 5a)(3 - 5a)$

(iv) $(4a - 3b)(4a - 3b)(4a - 3b)$

(v) $(3p - 1/6)(3p - 1/6)(3p - 1/6)$

Question 9

QUESTION

Verify:

(i) $x^3 + y^3 = (x + y)(x^2 - xy + y^2)$

(ii) $x^3 - y^3 = (x - y)(x^2 + xy + y^2)$

SOLUTION

This question asks us to verify two algebraic identities related to the sum and difference of cubes. We need to show that the left-hand side (LHS) is equal to the right-hand side (RHS) for both identities.

(i) Verify

Step 1: Expand the RHS

We start by expanding the right-hand side of the equation using the distributive property:

Step 2: Distribute and

Now, distribute and to each term inside the parentheses:

Step 3: Simplify by combining like terms

Notice that the terms and cancel each other out. Similarly, the terms and also cancel each other out:

Step 4: Compare with LHS

The simplified RHS is , which is exactly the same as the LHS of the given equation. Therefore, the identity is verified.

(ii) Verify

Step 1: Expand the RHS

We start by expanding the right-hand side of the equation using the distributive property:

Step 2: Distribute and

Now, distribute and to each term inside the parentheses:

Step 3: Simplify by combining like terms

Notice that the terms and cancel each other out. Similarly, the terms and also cancel each other out:

Step 4: Compare with LHS

The simplified RHS is , which is exactly the same as the LHS of the given equation. Therefore, the identity is verified.

Final Answer: Both identities are verified by expanding the RHS and showing it is equal to the LHS.

ANSWER

Simplify RHS.

www.ncertbooks.net

Question 10

QUESTION

Factorise the following:

- (i) $27y^3 + 125z^3$
- (ii) $64m^3 - 343n^3$

SOLUTION

This question asks us to factorize two expressions using the sum and difference of cubes identities.

(i) Factorize

Step 1: Recognize the form

We can rewrite the expression as a sum of cubes:

Step 2: Apply the sum of cubes identity

The sum of cubes identity is:

In our case, and . Substituting these values into the identity, we get:

Step 3: Simplify

Simplifying the terms inside the second parenthesis:

Therefore, the factorization is:

Final Answer:

(ii) Factorize

Step 1: Recognize the form

We can rewrite the expression as a difference of cubes:

Step 2: Apply the difference of cubes identity

The difference of cubes identity is:

In our case, and . Substituting these values into the identity, we get:

Step 3: Simplify

Simplifying the terms inside the second parenthesis:

Therefore, the factorization is:

Final Answer:

ANSWER

(i) $(3y + 5z)(9y^2 - 15yz + 25z^2)$

(ii) $(4m - 7n)(16m^2 + 49n^2 + 28mn)$

Question 11

QUESTION

Factorise: $27x^3 + y^3 + z^3 - 9xyz$

SOLUTION

We are asked to factorise the given expression. This expression resembles the identity.

Step 1: Rewrite the expression

We can rewrite the given expression as:

Here, we have , , and .

Step 2: Apply the identity

Recall the identity:

Substituting , , and into the identity, we get:

Step 3: Simplify the expression

Now, we simplify the terms inside the second parenthesis:

Substituting these back into the expression, we get:

Final Answer:

The factorised form of the given expression is:

$$(3x + y + z)(9x^2 + y^2 + z^2 - 3xy - yz - 3xz)$$

ANSWER

$$(3x + y + z)(9x^2 + y^2 + z^2 - 3xy - yz - 3xz)$$

Question 12

QUESTION

Verify that $x^3 + y^3 + z^3 - 3xyz = \frac{1}{2}(x + y + z)[(x - y)^2 + (y - z)^2 + (z - x)^2]$

SOLUTION

We are asked to verify the identity. This involves expanding and simplifying the right-hand side (RHS) to show that it is equal to the left-hand side (LHS).

Step 1: Expand the squares on the RHS

First, we expand the squared terms inside the brackets:

Step 2: Substitute the expanded squares into the RHS

Now, substitute these expansions back into the RHS:

Step 3: Simplify the expression inside the brackets

Combine like terms inside the brackets:

Step 4: Factor out the 2

Factor out a 2 from the terms inside the square brackets:

Step 5: Cancel the 1/2 and 2

The $\frac{1}{2}$ and the 2 cancel each other out:

Step 6: Expand the product

Now, expand the product of the two terms:

Step 7: Simplify by cancelling terms

Cancel out the terms that appear with opposite signs:

Final Answer:

Thus, we have shown that the RHS simplifies to $x^3 + y^3 + z^3 - 3xyz$, which is equal to the LHS. Therefore, the identity is verified.

ANSWER

Simplify RHS.

Question 13

QUESTION

If $x + y + z = 0$, show that $x^3 + y^3 + z^3 = 3xyz$

SOLUTION

This question requires us to prove the identity given the condition that . We will use a known algebraic identity to arrive at the solution.

Step 1: Recall the relevant identity

We know the following identity:

Step 2: Apply the given condition

We are given that . Substitute this into the identity:

Step 3: Simplify the equation

Since anything multiplied by 0 is 0, the right side of the equation becomes 0:

Step 4: Isolate the desired expression

Add to both sides of the equation:

Final Answer:

Therefore, we have shown that if , then .

ANSWER

Put $x + y + z = 0$ in the identity in Q12.

Question 14

QUESTION

Without calculating cubes, find the value of each:

(i) $(-12)^3 + (7)^3 + (5)^3$

(ii) $(28)^3 + (-15)^3 + (-13)^3$

SOLUTION

This question tests our ability to apply the identity: If , then , without actually calculating the cubes.

(i)

Step 1: Check if

Here, , , and .

So, .

Step 2: Apply the identity

Since , we can use the identity .

Therefore, .

Step 3: Calculate the product

.

Final Answer:

(ii)

Step 1: Check if

Here, , , and .

So, .

Step 2: Apply the identity

Since , we can use the identity .

Therefore, .

Step 3: Calculate the product

.

Now, .

Final Answer:

ANSWER

(i) -1260

(ii) 16380

www.ncertbooks.net

Question 15

QUESTION

Give possible expressions for the length and breadth of rectangles whose areas are:

(i) $25a^2 - 35a + 12$

(ii) $35y^2 + 13y - 12$

SOLUTION

This question requires us to factorize the given quadratic expressions, which represent the areas of rectangles. The factors will then represent possible expressions for the length and breadth of the rectangles.

(i) Area:

Step 1: Factorize the quadratic expression

We need to find two numbers that multiply to and add up to . These numbers are and .

Now, split the middle term:

Step 2: Factor by grouping

Group the terms:

Factor out the greatest common factor (GCF) from each group:

Step 3: Factor out the common binomial factor

Notice that is a common factor:

Step 4: Assign length and breadth

We can assign either factor to be the length or the breadth. One possible assignment is:

Length = , Breadth =

(ii) Area:

Step 1: Factorize the quadratic expression

We need to find two numbers that multiply to and add up to . These numbers are and .

Now, split the middle term:

Step 2: Factor by grouping

Group the terms:

Factor out the greatest common factor (GCF) from each group:

Step 3: Factor out the common binomial factor

Notice that is a common factor:

Step 4: Assign length and breadth

We can assign either factor to be the length or the breadth. One possible assignment is:

Length = , Breadth =

ANSWER

(i) One possible answer: Length = $5a - 3$, Breadth = $5a - 4$

(ii) One possible answer: Length = $7y - 3$, Breadth = $5y + 4$

www.ncertbooks.net

Question 16

QUESTION

Find possible expressions for the dimensions of cuboids whose volumes are:

- (i) $3x^2 - 12x$
- (ii) $12ky^2 + 8ky - 20k$

SOLUTION

This question asks us to find possible expressions for the dimensions (length, width, height) of cuboids, given their volumes as polynomial expressions. We need to factorize the given polynomials to find these dimensions.

(i) Volume:

Step 1: Factor out the common terms

We can see that $3x$ is common to both terms in the expression $3x^2 - 12x$. Factoring out gives us:

Step 2: Express as a product of three factors

To represent the volume as a product of three dimensions, we can rewrite as $3x(x - 4)$. This gives us:

Step 3: Assign dimensions

Therefore, possible dimensions of the cuboid are $3x$, $x - 4$, and 1 . Another possible answer is 3 , x , and $x - 4$.

(ii) Volume:

Step 1: Factor out the common terms

We can see that $4k$ is common to all terms in the expression $12ky^2 + 8ky - 20k$. Factoring out gives us:

Step 2: Factorize the quadratic expression

Now, we need to factorize the quadratic expression $3y^2 + 2y - 5$. We look for two numbers that multiply to -15 and add up to 2 . These numbers are 5 and -3 . So, we can rewrite the middle term as $5y - 3y$:

Now, factor by grouping:

Step 3: Express as a product of three factors

Substituting this back into our expression, we get:

Step 4: Assign dimensions

Therefore, possible dimensions of the cuboid are $4k$, $3y + 5$, and $y - 3$.

ANSWER

(i) One possible answer: $3x, x, x - 4$

(ii) One possible answer: $4k, 3y + 5, y - 1$

Relevant Resources

Explore more NCERT solutions (click links to visit):

| Resource | Visit Link |
|-------------------------------------|----------------------------------|
| NCERT Class 9 Mathematics Textbook | Download Book → |
| NCERT Class 9 Science Solutions | View Solutions → |
| RD Sharma Class 9 (Updated 2025-26) | View Solutions → |
| NCERT Class 9 English (Beehive) | Download Book → |

Key Formulas

Important Formulas for Exercise 2.4

| Formula / Concept | Description |
|--|---|
| Remainder Theorem | If a polynomial $p(x)$ (with a degree greater than or equal to 1) is divided by the linear polynomial $x - a$, then the remainder is $p(a)$. |
| Factor Theorem | If $p(x)$ is a polynomial of degree $n \geq 1$ and 'a' is any real number, then (i) $x - a$ is a factor of $p(x)$ if $p(a) = 0$, and (ii) $p(a) = 0$ if $x - a$ is a factor of $p(x)$. |
| Factorization by Splitting the Middle Term | To factorize a quadratic polynomial of the form $ax^2 + bx + c$, we find two numbers, say p and q , such that their sum is ' b ' and their product is ' ac '. The middle term ' bx ' is then split as ' $px + qx$ '. |
| $(a + b)^2$ | $a^2 + 2ab + b^2$ |
| $(a - b)^2$ | $a^2 - 2ab + b^2$ |
| $a^2 - b^2$ | $(a + b)(a - b)$ |
| $(x + a)(x + b)$ | $x^2 + (a + b)x + ab$ |
| $(a + b + c)^2$ | $a^2 + b^2 + c^2 + 2ab + 2bc + 2ca$ |
| $(a + b)^3$ | $a^3 + b^3 + 3ab(a + b)$ or $a^3 + 3a^2b + 3ab^2 + b^3$ |

| Formula / Concept | Description |
|--|---|
| $(a - b)^3$ | $a^3 - b^3 - 3ab(a - b)$ or $a^3 - 3a^2b + 3ab^2 - b^3$ |
| $a^3 + b^3$ | $(a + b)(a^2 - ab + b^2)$ |
| $a^3 - b^3$ | $(a - b)(a^2 + ab + b^2)$ |
| $a^3 + b^3 + c^3 - 3abc$ | $(a + b + c)(a^2 + b^2 + c^2 - ab - bc - ca)$ |
| Condition for $a^3 + b^3 + c^3 = 3abc$ | If $a + b + c = 0$, then $a^3 + b^3 + c^3 = 3abc$. |

🔗 Top FAQs

Q1. How many questions are in NCERT Solutions Class 9 Maths Chapter 2 Polynomials Exercise 2.4 for CBSE board exam 2025-26?

Exercise 2.4 of NCERT Solutions for Class 9 Maths Chapter 2 Polynomials contains exactly 16 questions. These questions focus on the application of Remainder Theorem and Factor Theorem for factorization of polynomials, which are crucial concepts for CBSE board exam 2025-26.

Q2. Where can I download free PDF of NCERT Solutions for Class 9 Maths Chapter 2 Polynomials Exercise 2.4 with step by step solutions?

You can download the free PDF of NCERT Solutions for Class 9 Maths Chapter 2 Polynomials Exercise 2.4 from the official NCERT website or various educational platforms offering step by step solutions. These PDFs are updated as per the CBSE 2025-26 syllabus and include detailed explanations of all 16 questions covering Remainder Theorem and Factor Theorem.

Q3. How many marks does Polynomials Chapter 2 Exercise 2.4 carry in CBSE Class 9 Maths board exam 2025-26 syllabus?

Polynomials (Chapter 2) carries approximately 10 marks in CBSE Class 9 Maths board exam 2025-26 as part of Unit II - Algebra. Exercise 2.4 focusing on factorization using Remainder Theorem and Factor Theorem is an important component that contributes to these marks and requires thorough practice of all 16 questions.

Q4. Which is the most difficult question in Exercise 2.4 of NCERT Solutions Class 9 Maths Chapter 2 Polynomials for CBSE 2025-26?

Questions 5 and 15 in Exercise 2.4 of NCERT Solutions Class 9 Maths Chapter 2 Polynomials are considered most challenging by students. These questions require advanced application of Factor Theorem and involve complex factorization of cubic polynomials with multiple steps, making them important for CBSE board exam 2025-26 preparation.

Q5. What is Remainder Theorem explained in NCERT Solutions for Class 9 Maths Chapter 2 Polynomials Exercise 2.4?

According to NCERT Solutions for Class 9 Maths Chapter 2 Polynomials Exercise 2.4, the Remainder Theorem states that when a polynomial $p(x)$ is divided by $(x - a)$, the remainder is $p(a)$. This theorem is extensively used in Exercise 2.4 questions to find remainders without actual division and forms the foundation for Factor Theorem applications in CBSE 2025-26 curriculum.

More Exercises

Visit all exercises from Chapter 2:

[EXERCISE 2.1](#) →

[EXERCISE 2.2](#) →

[EXERCISE 2.3](#) →

[EXERCISE 2.4](#) ✓ →

 [Complete Chapter: Class 9 Maths Ch 2: Polynomials](#) →

© NCERT Solutions - www.ncertbooks.net

All solutions verified by subject experts for CBSE 2025-26 | [Share this PDF to help other students!](#)