



MATHS

BOOKS - MBD NCERT SOLUTIONS

POLYNOMIALS

Multiple Choice Questions

1. Which one is polynomial ?

A.
$$rac{1}{x+1}$$

B.
$$\sqrt{x}+2$$

C. $\displaystyle rac{1}{x^2+2x+7}$
D. x^3+1

Answer: D

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2. Which one is polynomial?

A.
$$\frac{1}{x+1}$$

B. $x^{\frac{1}{3}} + 2$

$$\mathsf{C}.\,\frac{1}{x^2+1}$$

D.
$$x + \sqrt{2}$$
.

Answer: D



3. Which one is polynomial?

A.
$$\sqrt{x}+1$$

B.
$$rac{x}{x^3+1}$$

C. $rac{1}{x^2+1}$

$\mathsf{D.}\,x^3+1$

Answer: D

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4. Which one is polynomial?

A.
$$1 + \sqrt{x}$$

$$\mathsf{B.}\,x^2+1$$

C.
$$\displaystyle rac{1}{x^3+x^2+1}$$

D. $\displaystyle rac{1}{x^3}.$

Answer: B



5. Find the zeros of polynomial $6x^2 - 3 - 7x$ and verify the relationship between the zeros and their coefficients:

A.
$$\frac{-1}{3}, \frac{3}{2}$$

B. $\frac{-7}{3}, \frac{-3}{6}$
C. $\frac{7}{6}, \frac{-3}{6}$

D. None of these.

Answer: A



6. Find the zeros of the following quadratic polynomials and verify the relationship between the zeros and the coefficients:

$$4x^2 - 4x + 1$$

A.
$$\frac{1}{2}, \frac{1}{2}$$

B. $\frac{-1}{2}, \frac{-1}{2}$
C. 1, $\frac{1}{4}$

$\mathsf{D}.\,\frac{-1}{4},1$

Answer: A

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7. The zeroes of $3x^2 - 4 - x$ are :

A. 1,
$$\frac{-4}{3}$$

B. -1, $\frac{4}{3}$
C. -1, $\frac{-4}{3}$
D. 1, $\frac{4}{3}$.

Answer: B



8. The zeroes of $3x^2 + 1 - 4x$ are :

A. 1,
$$\frac{1}{3}$$

B. 1, $\frac{-1}{3}$
C. -1, $\frac{1}{3}$
D. -1, $\frac{-1}{3}$

Answer: A



9. The polynomial $p(x) = ax^2 + bx + c$ can

have at most zeros, where $a \neq 0$:

A. One

B. Two

C. Three

D. None of these.

Answer: B





10. The sum of the zeroes of the polynomial $2x^2 - 8x + 6$ is

A. 3

- B. 4
- C. 4
- $\mathsf{D.}-3.$

Answer: C



11. Which of the following expression is a quadratic polynomial?

A.
$$2x + 3$$

B. $3x^2 - 5x + 4$
C. $\frac{1}{2x^2 + 3x + 5}$

D. None of these.

Answer: B



12. The zeroes of the polynomial $x^2 - 7$ are :

A. $\sqrt{7}, \sqrt{7}$

B. 7, -7

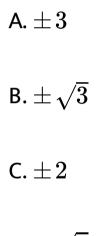
C. $\sqrt{7}, -\sqrt{7}$

D. None of these.

Answer: C



13. Find the zeros of the polynomial $f(x) = x^2 - 2$ and verify the relationship between its zeros and coefficients.



D. $\pm \sqrt{2}$

Answer: B



14. If the sum and product of zeroes of the polynomial are 7 and -5 respectively, the quadratic polynomial is :

A.
$$x^2 - 7x - 5$$

B. $x^2 + 7x - 5$

C.
$$x^2 - 7x + 5$$

D.
$$x^2 + 7x + 5$$
.

Answer: A

15. Which of the following expression is not a

polynomial?

A.
$$\displaystyle rac{1}{x+1}$$

B. $\displaystyle x^2+1$
C. $\displaystyle 4m^2+9m+1$
D. $\displaystyle 5y^2-6.$

Answer: A

16. How many (i) maximum (ii) minimum number of zeroes can a quadratic polynomial have ?
A.1

B. 2

C. 3

D. 4

Answer: B



17. If α and β are the zeros of the quadratic polynomial $p(t) = t^2 - 5t - 1$, find the value of $\frac{\alpha^2}{\beta^2} + \frac{\beta^2}{\alpha^2} + 2\left(\frac{\alpha}{\beta} + \frac{\beta}{\alpha}\right) - \alpha\beta$.

A. 1

B. 5

C.-5

D. -1

Answer: A

18. The sum of zeroes of quadratic polynomial is $-\sqrt{2}$ and product is 7, that quadratic polynomial is :

A.
$$x^2-\sqrt{2}x+7$$

B. $x^2+\sqrt{2}x+7$
C. $x^2-\sqrt{2}x-7$
D. $x^2+\sqrt{2}x-7$

Answer: B

1. Find the sum of zeroes of quadratic polynomial $x^2 + 7x + 10$.

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2. Find the product of zeroes of quadratic polynomial $x^2 + 7x + 10$.

3. Find the zeroes of the following quadratic polynomials and verify the relationship between the zeroes and the coefficients. (i) $x^2 - 2x - 8$.

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4. Find the product of zeroes of the quadratic

polynomial $x^2 - 2x - 8$.

1. Find the zeroes of the following quadratic polynomials and verify the relationship between the zeroes and the coefficients $x^2 - 2x - 8$

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2. Find the zeroes of the polynomial:

$$6x^2-7x-3$$

3. Find a quadratic polynomial with numbers

 $rac{1}{4}$ and -1 as the sum and product of its

zeroes respectively.

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4. Find a quadratic polynomial with the given number as the sum and product of its zeroes respectively are $\frac{1}{4}$ and 4.



5. Find a quadratic polynomial with the given number as the sum and product of its zeroes respectively are 3 and 2.

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6. Find a quadratic polynomial with the given number as the sum and product of its zeroes respectively are 5 and 3.

7. Find a quadratic polynomial whose zeroes

are -4 and 2 respectively.

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8. Find a quadratic polynomial whose zeroes

are -3 and 5.

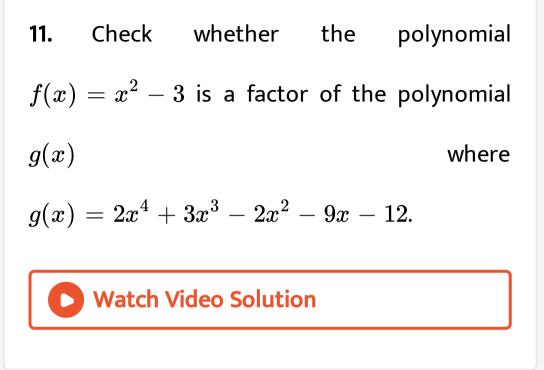
9. Find a quadratic polynomial whose zeroes

are 4 and -1.

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10. Find a quadratic polynomial whose zeroes

are 3 and -2.



12. Apply the division algorithm to find the quotient and remainder on dividing $f(x)=x^3-3x^2+5x-3$ by $g(x)=x^2-2$

13. Apply the division algorithm to find the quotient and remainder on dividing
$$f(x) = x^4 - 3x^2 + 4x + 5$$
 by $g(x) = x^2 + 1 - x$

14. Divide the polynomial $p(x) = x^4 - 3x^2 + 4x + 5$ by the polynomial $g(x) = x^2 - x + 1$ and find quotient and remainder.

15. Find all the zeros of the polynomial $f(x)=2x^4-3x^3-3x^2+6x-2$, if two of its zeros are $\sqrt{2}$ and $-\sqrt{2}$.

