



MATHS

BOOKS - VIDHYASANGAM - RAO'S ACADEMY MATHS (KANNADA ENGLISH)

POLYNOMIALS



1. The co-efficient of x^2 in $\sqrt{2}x-1$ is



3. Write the degree of each of the following polynomials.

$$5x^3 + 4x^2 + 7x$$

4. Write the degree of each of the following polynomials.

 $4-y^2$

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5. Write the degree of each of the following polynomials.

$$5t-\sqrt{7}$$

6. Write the degree of each of the following polynomials.



7. Classify the following as linear, quadratic and cubic polynomials.

$$x^2 + x$$

8. Classify the following as linear, quadratic

and cubic polynomials.

 $x - x^3$

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9. Classify the following as linear, quadratic and cubic polynomials.

$$y + y^2 + 4$$

10. Classify the following as linear, quadratic and cubic polynomials.

1 + x

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11. Classify the following as linear, quadratic and cubic polynomials.

3t

12. Classify the following as linear, quadratic and cubic polynomials.

 r^2



13. Classify the following as linear, quadratic and cubic polynomials.

 $7x^3$

1. Find the value of the polynomial $5x - 4x^2 + 3$ at.

x = 0

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2. Find the value of the polynomial $5x-4x^2+3$ at. x=-1



4. Find P(0), P(1) and P(2) for each of the following polynomials.

$$P(y)=y^2-y+1$$

5. Find P(0), P(1) and P(2) for each of the following polynomials.

 $P(t) = 2 + t + 2t^2 - t^3$

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6. Find P(0), P(1) and P(2) for each of the

following polynomials.

$$P(x) = 2x + 1$$

7. Find the zero of the polynomial in each of

the following cases.

P(x) = x + 5

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8. Find the zero of the polynomial in each of

the following cases.

$$P(x)=x-5$$

9. Find the zero of the polynomial in each of

the following cases.

$$P(x) = 2x + 5$$



10. Find the zero of the polynomial in each of the following cases.

$$P(x) = 3x - 2$$

11. Find the zero of the polynomial in each of

the following cases.

P(x) = 3x

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12. Find the zero of the polynomial in each of

the following cases.

P(x) = ax







2. Determine which of the following polynomials has (x+1) a factor : $x^4 + x^3 + x^2 + x + 1$ Watch Video Solution

3. Find the value of k if x-1 is the factor of

$$P(x)=2x^2+kx+\sqrt{2}$$

4. Find the value of k if x-1 is the factor of $P(x) = kx^2 - \sqrt{2}x + 1$

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5. Find the value of k if x-1 is the factor of

$$kx^2 - 3x + k$$

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6. Factorise : -

 $12x^2 - 7x + 1$



8. Factorise : -

$$6x^2+5x-6$$

$$3x^2 - x - 4$$

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$$x^3 - 2x^2 - x + 2$$

11. Factorise : -

$$P(x) = x^3 - 3x^2 - 9x - 5$$

$$x^3 + 13x^2 + 32x + 20$$





$$2y^3 + y^2 - 2y - 1$$

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1. Use suitable identities of find the following

products

(x+4)(x+10)

2. Use suitable identities of find the following products

(x+8)(x-10)

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3. Use suitable identities of find the following

products

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

4. Use suitable identities of find the following

$$igg(y^2+rac{3}{2}igg)igg(y^2-rac{3}{2}igg)$$



5. Use suitable identities of find the following

products

products

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

6. Evaluate the following products without

multiplying directly.

103 imes 107

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7. Evaluate the following products without multiplying directly.

95 imes96

8. Evaluate the following products without

multiplying directly.

104 imes96



9. Factrorise the following using appropriate identities.

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

10. Factrorise the following using appropriate

identities.

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



11. Factrorise the following using appropriate

identities.

$$x^2-rac{y^2}{100}$$

12. Expand each of the following , using suitable identities. $\left(x+2y+4z\right)^2$

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13. Expand each of the following , using suitable identities.

$$\left(2x-y+z
ight)^2$$

14. Expand each of the following , using suitable identities.

$$\left({\,-2x+3y+2z}
ight)^2$$

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15. Expand each of the following , using suitable identities.

$$\left(3a-7b-c
ight)^2$$

16. Expand each of the following , using suitable identities. $(-2x + 5y - 3z)^2$

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17. Expand each of the following , using suitable identities.

$$\left(rac{a}{4}-rac{b}{2}+1
ight)^2$$

18. Factorise : -

$4x^2 + 9y^2 + 16z^2 + 12xy - 24yz - 16xz$





20. Write the following cubes in expanded

form.

$$\left(2x+1
ight)^3$$



21. Write the following cubes in expanded

form.

 $(2a-3b)^3$

22. Write the following cubes in expanded

form.

$$\left[rac{3}{2}x+1
ight]^3$$



23. Write the following cubes in expanded

form.

$$\left(x-rac{2}{3}y
ight)^3$$

24. Evaluate using the suitable identity.

 $(99)^{3}$



25. Evaluate using the suitable identity.

 $(102)^{3}$

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26. Evaluate using the suitable identity.

 $(998)^3$



28. Factorise each of the following .

 $8a^3 - b^3 - 12a^2b + 6ab^2$

29. Factorise each of the following .

 $27 - 125a^3 - 135a + 225a^2$



30. Factorise each of the following .

 $64a^3 - 27b^3 - 144a^2b + 108ab^2$

31.
$$x + y + z = 0$$
 Show that
 $x^3 + y^2 + z^3 = 3xyz$
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32. Without actually calculating the cubes , find the value of the following. $(-12)^3 + (7)^3 + (5)^3$

33. Without actually calculating the cubes ,

find the value of the following.

$$(28)^3 + (\,-15)^3 + (\,-13)^3$$



34. Give passible expressions for the length and breadth of each of the following rectangles , in which their areas are given . Area : $25a^2 - 35a + 12$

35. Give passible expressions for the length and breadth of each of the following rectangles , in which their areas are given . $35y^2 + 13y - 12$

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36. What are the possible expressions for the

dimensions of the cuboids where volumes are

given below.

Volume : $3x^2 - 12x$



37. What are the possible expressions for the

dimensions of the cuboids where volumes are

given below as $12ky^2 + 8ky - 20k$