

POLYNOMIALS

Find Remainder (1-5)

Q1. Divide $4x^4 - 3x^3 - 2x^2 + x - 7$ by $(x-1)$

Q2. Divide $3x^4 + 2x^3 - \frac{x^2}{3} + \frac{2}{27}$ by $(x + \frac{2}{3})$

Q3. Divide $x^4 + 1$ by $(x+1)$

Q4. Divide $3x^4 - 4x^3 - 3x - 1$ by $(x-1)$

Q5. Divide $x^3 - 1$ by $x-1$

[Ans: Q1, $R = -7$; Q3, $R = 2$; Q5, 0
Q2, $R = -\frac{2}{27}$; Q4, $R = -5$]

© www.studiestoday.com

© www.studiestoday.com

Q6. Without actual division, find the remainder when $9x^3 - 3x^2 + x - 5$ is divided by $(x - \frac{2}{3})$
[Ans $R = -3$]

Q7. Using remainder theorem, find the remainder when $4x^3 - 12x^2 + 14x - 3$ is divided by $2x - 1$
[Ans $R = \frac{3}{2}$]

Q8. Check whether $7 + 3x$ is a factor of $3x^2 + 7x$
[Ans: Yes]



Q9. Find the value of K for which the polynomial $2x^4 + 3x^3 + 2Kx^2 + 3x + 6$ is completely divisible by $x+2$
[Ans: $K=1$]

Q10. Find the value of K for which the polynomial $Kx^3 + 9x^2 + 4x - 10$ leaves the remainder as -22 when divided by $x+3$
[Ans: $K=3$]