

Remainder Theorem and Factor Theorem

Class 10th

Maths

Q1: Use the Remainder Theorem to factorise the expression $2x^3 + x^2 - 13x + 6$

[Year 2011]

Q2: Find the value of 'k' if $(x-2)$ is a factor of $x^3 + 2x^2 - kx + 10$. Hence, determine whether $(x+5)$ is also a factor.

[Year 2011]

Q3: Using the Remainder Theorem factorise completely the polynomial $3x^3 + 2x^2 - 19x + 6$

[Year 2012]

Q4: If $(x-2)$ is a factor of the expression $2x^3 + ax^2 + bx - 14$ and when the expression is divided by $(x-3)$, it leaves a remainder 52, find the values 'a' and 'b'.

[2013]

Q5: Using the Remainder and Factor Theorems, factorise the following polynomial $x^3 + 10x^2 - 37x + 26$

[2014]

Q6: Find 'a' if the two polynomials $ax^3 + 3x^2 - 9$ and $2x^3 + 4x + a$, leave the same remainder when divided by $(x+3)$.

[Year 2015]

Q7: Using remainder theorem find the value of 'k', if on dividing $(2x^3 + 3x^2 - kx + 5)$ by $(x-2)$ leaves a remainder 7.

[Year 2016]

Q8: What must be subtracted from $16x^3 - 8x^2 + 4x + 7$ so that the resulting expression has $2x+1$ as a factor?

[Year 2017]

Q9 If $(x+2)$ and $(x+3)$ are factors of $x^3 + ax + b$, find the values of 'a' and 'b'. [Year 2018]

Q10 Use Remainder Theorem to factorise the following polynomial $2x^3 + 3x^2 - 9x - 10$ [Year 2018]

Extra Questions

Q1: Determine the value of m if $x-1$ is a factor of $x^3 - mx^2 + 11x - 6$

Q2: Find the value of 'a' if $(x-a)$ is a factor of $x^3 - a^2x + x + 2$

Q3: Find the value of 'k' if $(x-2)$ is a factor of $x^3 + 2x^2 - kx + 10$.

Q4: If $x^2 - 9$ is a factor of $x^3 + 5x^2 - 9x - 45$. Find the other factor.

Q5: Given that $(x+2)$ and $(x+3)$ are factors of $2x^3 + ax^2 + 7x - b$. Determine the values of a and b .

Q6: Using the Remainder Theorem factorise completely the following polynomial $3x^3 + 2x^2 - 19x + 6$

Q7: What number should be added to $27x^3 - 54x^2 + 36x - 11$ such that the resulting polynomial is divisible by $3x - 2$?