

1. Evaluate: 249×251 by using an identity.
2. Find k if $(x - 2)$ is a factor of $2x^3 - 6x^2 + 5x + k$.
3. Factorise: $8p^3 + \frac{12}{5}p^2 + \frac{6}{25}p + \frac{1}{125}$
4. Factorise: $x^3 + 3x^2y + 3xy^2 + y^3 - 8$
5. Expand: $\left(-\frac{x}{2} + y + \frac{1}{4}\right)^2$
6. Find the value of $x^3 - 8y^3 - 36xy - 216$, when $x = 2y + 6$
7. If $x + \frac{1}{x} = 3$, find the value of $x^2 + \frac{1}{x^2}$ and $x^3 + \frac{1}{x^3}$
8. Verify that $(x - 1)$, $(x - 2)$ and $(2x + 1)$ are factors of the polynomial $2x^3 - 5x^2 + x + 2$.
9. Evaluate 100×96 using a suitable identity.
10. If $\left(\frac{8}{15}\right)^3 - \left(\frac{1}{3}\right)^3 - \left(\frac{1}{5}\right)^3 = \frac{x}{75}$, find x .