

Activity Worksheet

Challenging brain

Sub : Mathematics

Grade: IX

Date:

Name:

ID No.....

1. State whether the following statements are true or false? Justify your answer.

(i.) $\sqrt{5} \frac{x^{\frac{5}{2}}}{x^2} + 2$ is a polynomial.

(ii.) A binomial may have degree 5.

(iii.) (i) Without finding the cubes factorise

$$(x - 2y)^3 + (2y - 3z)^3 + (3z - x)^3$$

(iv.) If $(x - 2)$ is a factor of $2x^4 - Rx^3 + 3x^2 + 3x - 2$, find the value of R.

(v.) If both $(x - 2)$ and $\left(x - \frac{1}{2}\right)$ are factors of $px^2 - 5x + r$, show that $p = r$,

(vi.) If $x + y = 12$ and $xy = 27$, find the value of $x^3 + y^3$
