

# Activity Worksheet

Challenging brain

Sub : Mathematics

Grade: IX

Date: .....

Name: .....

ID No.....

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

(i.) A polynomial can not have more than one zero.

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(ii.) A trinomial can have at most three terms.

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(iii.) Factorise:  $7\sqrt{2}x^2 - 10x - 4\sqrt{2}$

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(iv.) If  $x + 2a$  is a factor of  $x^5 - 4a^2x^3 + 2x + 2a + 3$ , find  $a$ .

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(v.) Without actual division prove that  $x^4 - 2x^3 - 7x^2 + 8x + 12$  is divisible by  $x^2 - 5x + 6$ .

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(vi.) Factorise:  $(x^2 - y^2)^3 + (y^2 - z^2)^3 + (z^2 - x^2)^3$

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