

# Activity Worksheet

Challenging brain

Sub : Mathematics

Grade: IX

Date: .....

Name: .....

ID No.....

1. Write the correct answer for each of the following

(i.) Which one of the following is a polynomial?

(a)  $\frac{x-2}{x+2}$

(b)  $\frac{x^2}{5} - \frac{5}{x^2}$

(c)  $\sqrt{5x} - 3$

(d)  $2x^2 + \frac{3x^{5/2}}{x^{3/2}}$

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(ii.) If  $f(x) = x - 5$ , then  $f(x) + f(-x)$  is equal to

(a) 0

(b)  $2x$

(c) -10

(d) 10

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(iii.) If  $x^{101} + 101$  is divided by  $x + 1$ , the remainder is

(a) 102

(b) 0

(c) 1

(d) 100

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(iv.)  $(x - 1)$  is a factor of the polynomial

(a)  $x^4 + x^3 + x^2 + 1$

(b)  $x^4 + 2x^3 + 3x^2 + 2$

(c)  $x^3 - x^2 - x + 1$

(d)  $x^3 + x^2 + x + 1$

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(v.) The coefficient of  $x^2$  in the expansion of  $(x - 5)^3$  is

(a) 15

(b) 75

(c) -75

(d) -15

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