

# Activity Worksheet

Challenging brain

Sub : Mathematics

Grade: X

Date: .....

Name: .....

ID No.....

Write the correct answer for each of the following:

i. If  $\sin A + \sin^2 A = 1$ , then the value of the expression  $\cos^2 A + \cos^4 A$  is

(a) 1

(b)  $\frac{1}{2}$

(c) 2

(d) 3

Sol.

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ii. Given that  $\tan \alpha = \sqrt{3}$  and  $\tan \beta = \frac{1}{\sqrt{3}}$  then the value of  $(\alpha + \beta)$  is

(a)  $0^\circ$

(b)  $30^\circ$

(c)  $60^\circ$

(d)  $90^\circ$

Sol.

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iii. Given that  $3 \cot \theta = 4$ , then  $\left( \frac{5 \sin \theta - 3 \cos \theta}{5 \sin \theta + 3 \cos \theta} \right)$  is equal to

(a)  $\frac{1}{9}$

(b) 9

(c)  $\frac{2}{5}$

(d)  $\frac{1}{2}$

Sol.

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