

9. Let two numbers have arithmetic mean 9 and geometric mean 4. Then these numbers are the roots of the quadratic equation (2004)

1) $x^2 + 18x + 16 = 0$ 2) $x^2 - 18x - 16 = 0$

3) $x^2 + 18x - 16 = 0$ 4) $x^2 - 18x + 16 = 0$

Ans.

(4) Let the numbers be a, b

$$\therefore a + b = 18, \sqrt{ab} = 4 \Rightarrow ab = 16,$$

a and b are roots of the equation

$$\Rightarrow x^2 - 18x + 16 = 0.$$