TOPIC

Mathematics – Section I – Question 3

QUESTION

The Newton-Raphson method formula for finding the square root of a real number R from the equation $x^2 = R$ is

(A)
$$x_{i+1} = \frac{x_i}{2}$$

(B) $x_{i+1} = \frac{3x_i}{2}$
(C) $x_{i+1} = \frac{1}{2} \left(x_i + \frac{R}{x_i} \right)$
(D) $x_{i+1} = \frac{1}{2} \left(3x_i - \frac{R}{x_i} \right)$

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