

Most Repeated Questions in JEE Main Math from AP/GP/Vn Method

Q: If the first term of an A.P. is 3 and the sum of its first four terms is equal to one-fifth of the sum of the next four terms, then the sum of the first 20 terms is equal to

Q: In an arithmetic progression, if $S_{40} = 1030$ and $S_{12} = 57$, then $S_{30} - S_{10}$ is equal to:

Q: The interior angles of a polygon with n sides, are in an A.P. with common difference 6° . If the largest interior angle of the polygon is 219° then n is equal to

Q: Consider an A.P. of positive integers, whose sum of the first three terms is 54 and the sum of the first twenty terms lies between 1600 and 1800. Then its 11^{th} term is:

Q: Let $a_1, a_2, a_3, \dots$ be a G.P. of increasing positive terms. If $a_1 a_5 = 28$ and $a_2 + a_4 = 29$, the a_6 is equal to

Q: Let three real numbers a, b, c be in arithmetic progression and $a + 1, b, c + 3$ be in geometric progression. If $a > 10$ and the arithmetic mean of a, b and c is 8, then the cube of the geometric mean of a, b and c is

Q: For $x \geq 0$ the least value of K , for which $4^{1+x} + 4^{1-x}, K/2, 16^x + 16^{-x}$ are three consecutive terms of an A.P., is equal to :

Q: Let the first three terms 2, p and q , with $q \neq 2$, of a G.P. be respectively the 7th, 8th and 13th terms of an A.P. If the 5th term of the G.P. is the n th term of the A.P., then n is equal to:

Q: In an increasing geometric progression of positive terms, the sum of the second and sixth terms is $70/3$ and the product of the third and fifth terms is 49. Then the sum of the 4th, 6th, and 8th terms is equal to:

Q: Let $a_1, a_2, a_3, \dots$ be a GP of increasing positive numbers. If the product of fourth and sixth terms is 9 and the sum of fifth and seventh terms is 24, then $a_1 a_9 + a_2 a_4 a_9 + a_5 + a_7$ is equal to _____

Q: Let A_1 and A_2 be two arithmetic means and G_1, G_2, G_3 be three geometric means of two distinct positive numbers. Then $G_1^4 + G_2^4 + G_3^4 + G_1^2 G_3^2$ is equal to:

Q: Let the first term α and the common ratio r of a geometric progression be positive integers. If the sum of squares of its first three terms is 33033, then the sum of these three terms is equal to