



1	If the 4th and 9th terms of a GP are 54 and 13122 respectively then its 6th term is (a) 243 (b) 1458 (c) 486 (d) 729
2	Which term of the GP 5, 10, 20, 40,... is 5120? (a) 9th (b) 10th (c) 11th (d) 12th
3	The 8th term from the end of the GP 3, 6, 12, 24, ..., 12288 is (a) 96 (b) 192 (c) 48 (d) 288
4	If nth term of a G.P. is 2^n , then find the sum of its first 6 terms. (a) 126 (b) 124 (c) 190 (d) 154
5	In a GP it is given that $a = 3$, $a_n = 96$ and $S_n = 189$. The value of n is (a) 7 (b) 8 (c) 6 (d) 5
6	How many terms of the GP 2, 6, 18,... will make the sum 728? (a) 6 (b) 9 (c) 8 (d) 7
7	If the third term of G.P. is 4, then the product of its first 5 terms is: (a) 4^3 (b) 4^4 (c) 4^5 (d) none of these
8	In a G.P, the 3rd is 24 and the 6th term is 192, then the 10th term is: (a) 1084 (b) 3290 (c) 3072 (d) 2340
9	The 5th term from the end of the sequence 16, 8, 4, 2 ... $\frac{1}{16}$ is: (a) 1 (b) 2 (c) 3 (d) 4
10	If n terms of a G.P. 3, 32, 33... are needed to give the sum 120, then the value of n is: (a) 2 (b) 3 (c) 4 (d) 5
11	Assertion (A): The first term of a GP is 1. The sum of third and fifth term is 90, then the common ratio are 3 or -3. Reason (R): Common ratio of GP $a_1, a_2, a_3, \dots$ is given by $a_2 - a_1 = a_3 - a_2 = \dots$
12	Assertion (A): Sum of 7 terms of the GP 3, 6, 12, ... is 381. Reason (R): Sum of first n terms of the G. P is given by $S_n = \frac{a(r^n - 1)}{r - 1}$, where a = first term, r = common ratio and $ r > 1$.

13	Assertion (A): The sum of the series $\frac{3}{\sqrt{5}} + \frac{4}{\sqrt{5}} + \sqrt{5} + \dots$ 25 terms is $75\sqrt{5}$ Reason (R): If 27, x, 3 are in GP, then $x = \pm 4$.
14	Assertion (A): The sum of first 6 terms of the GP 4, 16, 64, ... is equal to 5460. Reason (R): Sum of first n terms of the G. P is given by $S_n = \frac{a(r^n - 1)}{r - 1}$, where a = first term, r = common ratio and $r > 1$.
15	If a, b, c, d are in G.P. ; prove that, a + b, b + c, c + d are also in G.P.
16	Prove that : $9^{1/3}, 9^{1/9}, 9^{1/27}, \dots = 3$
17	Insert 4 Geometric means between 1 and 243,
18	If a, b, c and d are in G.P. Prove that, $(a^n + b^n), (b^n + c^n), (c^n + d^n)$ are in G.P.
19	Find the sum of 'n' terms of the series : $0.5 + 0.55 + 0.555 + \dots$ n terms.
20	Three numbers are in AP their sum is 15. If 1, 3, 9 be added to them respectively they form a GP Find the numbers.
21	The 5th, 8th and 11th term of a GP are p, q and s, respectively. Show that $q^2 = ps$
22	If S_n denotes the sum of n terms of a G.P., prove that $(S_{10} - S_{20})^2 = S_{10} (S_{30} - S_{20})$
23	A sequence of non-zero numbers is said to be a geometric progression, if the ratio of each term, except the first one, by its preceding term is always constant. Rahul, being a plant lover, decides to open a nursery and he bought few plants and pots. He wants to place pots in such a way that the number of pots in the first row is 2, in second row is 4 and in the third row is 8 and so on....  (a) Find the constant multiple by which the number of pots is increasing in every row (1) (b) Find the number of pots in 8th row. (1) (c) Find the difference in number of pots placed in 7th row and 5th row (2) OR (c) If Rahul wants to place 510 pots in total , then find the total number of rows formed in this arrangement (2)

Answers

1	C	6	A
2	C	7	C
3	A	8	C
4	B	9	A
5	C	10	C

11	A is true but R is false.
12	Assertion and Reason both are true and Reason is the correct explanation of Assertion
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14	Assertion and Reason both are true and Reason is the correct explanation of Assertion
17	$G_1 = 3, G_2 = 9, G_3 = 27, G_4 = 81$
19	$\frac{5}{81} [9n - 1 + (0.1)^n]$
20	the numbers are 15, 5, -5 or 3, 5, 7.
23	a) 2 b) 256 c) 96 or 8