

ST. LAWRENCE HIGH SCHOOL A JESUIT CHRISTIAN MINORITY INSTITUTION



worksheet-6

SUBJECT – MATHEMATICS

1st term

Chapter: Sequence & Series

Topic: Geometric Progression (GP)

Choose the correct option

- 1. The third term of a GP is b and its common ratio is r; then its first term is?
 - a) $\frac{r}{b}$

 - b) $\frac{b}{r}$ c) $\frac{b}{r^2}$ d) $\frac{r}{b^2}$
- 2. In a GP, the product of the first three terms is $\frac{27}{8}$; then its middle term is
 - a) 1/2
 - b) 1
 - c) 3/2
 - d) 2
- 3. The GM of two numbers is $= \pm 12$. If one number is 16, then the other number is
 - a) 3
 - b) 6
 - c) 8
 - d) 9

Class: XI

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(1 X 15 = 15)

- 4. Five numbers are in GP and their product is 3¹⁰; the third number will be
 - a) 2
 - b) 6
 - c) 9
 - d) 12
- 5. 15, 45 and x are in GP. Then x = ?
 - a) 2
 - b) 5
 - c) 8
 - d) 11
- 6. If three unequal real numbers are in GP, then their reciprocals are in a) AP
 - b) GP
 - c) Arithmetico-Geometric series
 - d) None of these.

7. The relation between AM & GM of two unequal positive number is -

- a) AM > GM
- b) $AM \leq GM$
- c) $AM \geq GM$
- d) AM > GM
- 8. Which of the followings is not true
 - a) The common ratio of a GP is always positive.
 - b) If each term of a GP is multiplied by 5, the resulting terms are also in GP.
 - c) If each term of a GP is divided by 5, the resulting terms are also in GP.
 - d) None of these.

9. If 3x+1, 14 and 28 are in GP then x = ?a) 5 **b**) 4 c) 3 d) 2 The r^{th} term of a GP is $(-1)^{r-1}$. 2^{r+1} , Then the 4^{th} term is -10. a) 16 b) -32 c) -64 d) 128 The 8^{th} term of the GP $\{2, 6, 18, 54, ...\}$ – 11. a) $2 \cdot 3^7$ b) 2 · 3⁶ c) 2 · 3⁸ \dot{d} 2 · 3⁹ If 5, x, 405 are in GP then x = ?12. a) 45 **b) -45** c) ±15 d) ±45 If 4 is multiplied to each term of a GP, Then the resulting series is 13. a a) AP b) GP

- c) Arithmetico-Geometric series
- d) None of these.

- 14. If 4 is added to each term of a GP, Then the resulting series is a -a) AP
 - b) GP
 - c) Arithmetico-Geometric series
 - d) None of these.

15. If A.M. of two numbers is 15 & G.M. is 12, then the numbers are –
a) 24 & 7

- b) 26 & 7
- c) 26 & 6
- d) 24 & 6

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