

ST. LAWRENCE HIGH SCHOOL A JESUIT CHRISTIAN MINORITY INSTITUTION



Worksheet-24

SUBJECT – MATHEMATICS 2nd-term **Chapter: Trigonometry & Algebra Class: XI Topic: General Solutions & Binomial** Date: 21.11.2020 **Choose the correct option** (1 X 15 = 15)1. The general solution of $\cos \theta = 0$ is ? a) $\theta = n\pi$ **b)** $\theta = (2n+1)\frac{\pi}{2}$ c) $\theta = 2n\pi$ d) $\theta = (2n-1)\frac{\pi}{2}$ 2. The general solution of $\sin \theta = 1$ is ? a) $\theta = n\pi$ **b)** $\theta = (4n+1)\frac{\pi}{4}$ c) $\theta = 2n\pi$ d) $\theta = (4n+1)\frac{\pi}{2}$ 3. If $\tan \theta = 1$ and $0^{\circ} \le \overline{\theta} \le 360^{\circ}$, then $\theta = ?$ a) 45° & 225° b) 45° & 135° c) 45° & 315° d) 45° & 210° 4. The general solution of $\cot \theta = \cot \alpha \ (\alpha \neq 0)$ is ? a) $\theta = n\pi + \alpha$ b) $\theta = n\pi + \frac{\alpha}{2}$ c) $\theta = n\pi - \alpha$ d) $\theta = \alpha$

5. The general solution of $\operatorname{cosec} \theta = \operatorname{cosec} \alpha \ (\alpha \neq 0)$ is ? a) $\theta = n\pi + \alpha$ b) $\theta = n\pi + \frac{\alpha}{2}$ c) $\theta = n\pi\alpha$ d) None of these. 6. The general solution of $\sin \theta = \cos \theta$ is ? a) $\theta = (2n+1)\frac{\pi}{4}$ b) $\theta = n\pi + \frac{\pi}{4}$ c) $\theta = \frac{\pi}{4}$ d) None of these. 7. The general solution of the equation $\tan 3x = 1$ is ? a) $n\pi + \frac{\pi}{12}$ b) $n\pi + \frac{\pi}{4}$ c) $\frac{n\pi}{3} + \frac{\pi}{4}$ d) $\frac{n\pi}{3} + \frac{\pi}{12}$ 8. The number of terms in the expansion of $\left(x - \frac{2}{3x}\right)^{11}$ is ? a) 11 , b) 12 , c) 13 , d) 14 9. The index of y in the 10th term of the expansion of $(x + y)^{19}$ is ? a) 9 , b) 10 , c) 19 , d) 20 10. The middle term in the expansion of $(2x - 3y)^{12}$ is ? a) 7th term b) 8th term c) 8th term d) None of these. 11. The middle term in the expansion of $(3x - 4y)^{15}$ is ? a) 6th & 7th terms. **b)** 5th & 6th terms. c) 7th & 8th terms. d) 8th & 9th terms.

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12. The index of a in the 12<sup>th</sup> term of the expansion of (a + 2b)^{20} is ?
   a) 9
   b) 10
   c) 19
   d) 20
13. The coefficient of x^{15} in the expansion of \left(x^3 + \frac{2}{x^2}\right)^{10} is ?
   a) 650
   b) 850
   c) 960
   d) 860
14. The coefficient of x^{-2} in the expansion of \left(2x^3 - \frac{1}{x^2}\right)^6 is ?
        a) 60
        b) 50
        c) 96
        d) 86
15. The coefficient of x^4 in the expansion of (1 + x + x^2 + x^3)^{11}
     is?
      a) 660
               , b) 909 , c) 990 , d) None of these.
                                                                                Prepared by :-
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