Chapter 12 (Objectives)

APPLICATION OF TRIGONOMETRY

TEXTBOOK OF ALGEBRA AND TRIGONOMETRY FOR CLASS XI

Fill in the blanks.

1. $\theta =$ …… if $\sin\theta = 0.5791$.
2. The angle above the horizontal line is called …….
3. The angle …….. the horizontal line is called "angle of depression".
4. A triangle, which is not right, is called ……. triangle.
5. In oblique triangle ABC; $c^2 =$ ……
6. According to law of cosine; $\cos\alpha =$ ……..
7. $\dfrac{b-c}{b+c} = \dfrac{\tan\frac{\beta-\gamma}{2}}{\tan\frac{\beta+\gamma}{2}}$ is called ……
8. According to the sine of half the angles in term of the sides, $\sin\frac{\beta}{2} =$ ……..
9. $\sqrt{\dfrac{s(s-c)}{ab}} =$ ……
10. Area of triangle in terms of measures of its sides is given as ……
11. The circle passing through the vertices of a triangle is called a ……
12. Radius of circum circle is called ……..
13. Circum radius is given by formula ……..
14. $\dfrac{abc}{4\Delta} =$ …….
15. The circle drawn inside a triangle touching its three sides is called ……..
16. Centre of inscribe circle is called …….
17. In-radius of in-circle is given by …….
18. A circle which touches one side of triangle externally and other two produced sides, is called …… or ……
19. The centres of e-circles are called ……..
20. In law of tangent $\dfrac{c-a}{c+a} =$ ……..
21. $\cos\frac{\beta}{2} =$ ……..

Ñ KEY

01- $35^\circ 23'$ ***02-*** Angle of elevation ***03-*** Below

04- Oblique ***05-*** $a^2 + b^2 - 2ab\cos\gamma$.

06- $\dfrac{b^2 + c^2 - a^2}{2bc}$ ***07-*** Law of tangent ***08-*** $\sqrt{\dfrac{(s-c)(s-a)}{ca}}$

09- $\cos\frac{\gamma}{2}$ ***10-*** $\Delta = \sqrt{s(s-a)(s-b)(s-c)}$

11- Circum circle ***12-*** Circum radius ***13-*** $R = \dfrac{a}{2\sin\alpha}$

14- R (Circum radius) ***15-*** Inscribe circle or in-circle ***16-*** In-centre

17- $r = \dfrac{\Delta}{s}$ ***18-*** Escribed circle, ex-circle ***19-*** ex-centres

20- $\dfrac{\tan\frac{\gamma-\alpha}{2}}{\tan\frac{\gamma+\alpha}{2}}$ ***21-*** $\sqrt{\dfrac{s(s-c)}{ab}}$

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