## Practice Questions of Lecture 38 to 43

**Q.1:** Identify the surface $x^2 - 4y^2 - 4x + 8y - 4z = 0$ and $y-$ and $z-$intercepts.

**Q.2:** Identify the surface $4x^2 + 25y^2 - z^2 - 8x - 50y + 6z + 138 = 0$ and trace in all coordinate planes.

**Q.3:** In an equilateral triangle, show that $\sec B = 1 + \sec b$.

**Q.4:** Prove that in a spherical triangle ABC

$$\sin\frac{A}{2} = \sqrt{\frac{\sin(s-b)\sin(s-c)}{\sin b \sin c}}, \text{ where } 2s = a + b + c.$$