

4. Consider the three points $P_1(0,0,0)$, $P_2(2,3,1)$, and $P_3(-3,1,3)$

a. Show that the triangle with the given vertices is a right angle triangle

b. Find the area of the triangle in part a.

Ans _____

5. Find the volume of the solid that lies inside both spheres

$$x^2 + y^2 + z^2 + 2x - 4y + 4z + 5 = 0$$

$$x^2 + y^2 + z^2 = 4$$

Ans _____

6. Write an inequality that represents the following

a. The region between the xz plane and the vertical plane $y = 4$.

Ans _____

b. The solid upper hemisphere of radius 3 centered at the origin

Ans _____