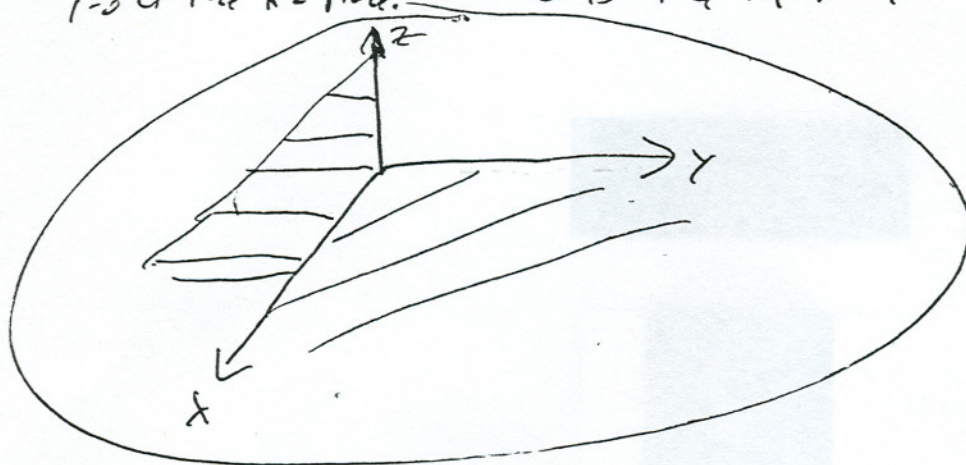


9. Graph and describe the graph of $yz = 0$ in 3-space.

This graph is the union of $y=0$ together with $z=0$
 $y=0$ is the xz plane. $z=0$ is the xy plane



10. Consider the triangle with vertices $P = (1, 2, 3)$, $Q = (0, 1, 2)$, and $R = (2, 4, 7)$. Find the angle of this triangle at the vertex Q .



$$\vec{QP} = \vec{i} + \vec{j} + \vec{k}$$

$$\vec{QR} = 2\vec{i} + 3\vec{j} + 5\vec{k}$$

$$\vec{QP} \cdot \vec{QR} = \|\vec{QP}\| \|\vec{QR}\| \cos \theta$$

$$\theta = \cos^{-1} \left(\frac{\vec{QP} \cdot \vec{QR}}{\|\vec{QP}\| \|\vec{QR}\|} \right) = \cos^{-1} \left(\frac{2+3+5}{\sqrt{3} \sqrt{4+9+25}} \right)$$