

Math 213 Discussion Worksheet – Week 4

1. If a point P is located 2 units in front of the yz -plane, 3 units to the right of the xz -plane, and 4 units above the xy -plane. (a) Find the coordinates of the point $P = (\quad , \quad , \quad)$. (b) Locate the point in a 3-dimensional coordinate system.

2. (a) Find the equation of the plane perpendicular to $n = (2, 3, 1)$ and going through the point $(1, 0, 4)$. (b) Find the intercepts of the plane with the axes. (c) Sketch the plane in a 3-dimensional coordinate system.

3. (a) Find the lengths of the sides of the triangle with vertices $(0, 0, 0)$, $(1, 2, 2)$, $(-2, -1, 2)$. (b) Determine whether the triangle is a right triangle, an isosceles triangle, or neither.