Precalc BC Intersections Name:

**DO ON SEPARATE PAPER**

1. Write a parametric equation for the line passing through P(3, 5, 1) and

Q(2, 3, 5)

1. Find the measure of  where P and Q are as above and R is (4, -2, 0).
2. Find the intersection of the line , A(-1, 4, 0); B(1, 5, 3),

with the plane *x* – 2*y* + *z* = 3 .

1. Describe the intersection of the circular cone, *x2 + y2 = z2*, with each of these:

*(Make sketches, then use substitution to verify your conjectures)*

a) the plane z = 4 b) the plane x = 9 c) the plane x + z = 10

1. Find the intersection of the line  with the plane whose equation is .

6. Prove that the line is parallel to the plane .

7. Given the following points: A(1, 4, 3); B(5, 6, 1); C(0, 5, 5) and D(2, 9, 7), find the point of intersection of the lines  and .