1. [ ] Proper notation.

2. [3] Find an equation for the plane containing the point (1, 2, 3) and the line \( r(t) = (1 + 2t, t, 2 - t) \).

3. [3] Find an equation for the plane containing the lines \( r(t) = (1, 2 + t, 3 - 2t) \) and \( s(t) = (1 - t, 2 + 2t, 3 + t) \).

4. [3] Find an equation for the tangent plane to \( f(x, y) = \frac{x^2y^2}{x^2 + y^2} \) at (1, 2).