~~8~~ 51

3. Find the equations of the line which contains $(1, 3, 4)$ and is perpendicular to $2x - 9y + 4z = 8$.

$$\frac{x-1}{2} = \frac{y-3}{-9} = \frac{z-4}{4}$$

4. Find the equation of the plane which contains $(5, 8, 9)$ and is perpendicular to $\frac{x-3}{7} = \frac{y-2}{9} = \frac{z-6}{8}$.

$$7(x-5) + 9(y-8) + 8(z-9) = 0$$