

Session 89

Subject

Year

Month

Date

(P)

$$\cancel{\oint} dx + \cancel{\oint} dy + \cancel{\oint} dz$$

$$\begin{matrix} P_x \\ Q_y \\ R_z \end{matrix}$$

$$\begin{matrix} P_x \\ Q_y \\ R_z \end{matrix}$$

$$M_y = 2g_z = N_x$$

$$M_z = g^2 = P_x$$

$$N_z = 2g_y = P_y$$

$$\begin{matrix} P \\ \cancel{Q} \\ \cancel{R} \\ \cancel{N} \end{matrix}$$

$$\begin{matrix} \cancel{M} \\ \cancel{P} \\ \cancel{R} \\ \cancel{Q} \end{matrix}$$

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Potential:

$$f_x = M = g^2 z \Rightarrow f = a_1 g^2 z + C$$

$$\Rightarrow f = a_1 g^2 z + g(y, z)$$

$$\Rightarrow f_y = 2a_1 g z + g_y(y, z)$$

$$\Rightarrow N = 2a_1 g z$$

$$\Rightarrow g_y(y, z) = 0$$

$$\Rightarrow g(y, z) = \cancel{y} + h(z)$$

$$\Rightarrow f = a_1 g^2 z + \cancel{y} + h(z)$$

$$\Rightarrow f_z = a_1 g^2 \cancel{z} + \cancel{y} + h(z)$$

$$\Sigma P = a_1 g^2 \cancel{z} \Rightarrow h(z) = 0$$

$$\Rightarrow h(z) = C$$