



Key Takeaways



Integration/Summation of determinant

- If $\Delta(x) = \begin{vmatrix} f_1(x) & g_1(x) & h_1(x) \\ a & b & c \\ d & e & f \end{vmatrix}$

$$\sum \Delta(x) = \begin{vmatrix} \sum f_1(x) & \sum g_1(x) & \sum h_1(x) \\ a & b & c \\ d & e & f \end{vmatrix}$$

- **Note:** If variable is present in more than one row (or column), then first expand the determinant and then apply summation or integration.

