$$\begin{aligned}\int \left(e^t\,\mathbf{i} + 2t\,\mathbf{j} + \ln 3t\,\mathbf{k}\right)\,dt &= \left(\int e^t\,dt\right)\mathbf{i} + \left(\int 2t\,dt\right)\mathbf{j} + \left(\int \ln 3t\,dt\right)\mathbf{k} \\ &= e^t\,\mathbf{i} + t^2\,\mathbf{j} + (t\ln 3t - t)\,\mathbf{k} + \mathbf{C},\end{aligned}$$

where $\mathbf{C}$ is a vector constant of integration.