

$$\mathbf{A} \times \mathbf{B} = \begin{vmatrix} \dot{\mathbf{i}} & \dot{\mathbf{j}} & \dot{\mathbf{k}} \\ A_x & A_y & A_z \\ B_x & B_y & B_z \end{vmatrix} \begin{vmatrix} \dot{\mathbf{i}} & \dot{\mathbf{j}} \\ A_x & A_y \\ B_x & B_y \end{vmatrix}$$