

6.3.4

$$V \times U = -(U \times V)$$

Theorem 6.3.1 = ~~$V \times U = -U \times V$~~

$$U \times V = \begin{bmatrix} i & j & k \\ u_1 & u_2 & u_3 \\ v_1 & v_2 & v_3 \end{bmatrix}$$

(1) ... $U \times V = i(u_2v_3 - u_3v_2) - j(u_3v_1 - u_1v_3) + k(u_1v_2 - u_2v_1)$

$$V \times U = \begin{bmatrix} i & j & k \\ v_1 & v_2 & v_3 \\ u_1 & u_2 & u_3 \end{bmatrix}$$

(2) ... $V \times U = i(v_2u_3 - v_3u_2) - j(v_3u_1 - v_1u_3) + k(v_1u_2 - v_2u_1)$

So from 1 and 2 we can approve $V \times U = -(U \times V)$