

$$a = 3i - j + 2k$$



$$(3 \quad -1 \quad -2) \times (-1 \quad 4 \quad 3)$$

$$b = -i + 4j + 3k$$

$$\begin{vmatrix} i & j & k \\ 3 & -1 & -2 \\ -1 & 4 & 3 \end{vmatrix} = ((-1) \cdot 3) - (-2 \cdot 4)i + ((-2) \cdot (-1) - (3 \cdot 3))j + (3 \cdot 4) - (-1 \cdot -1)k$$

$$= 3 - (-8)k$$

