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Cross Product

i	j	k
a_x	a_y	a_z
b_x	b_y	b_z

	-10	0	27
	i	j	k
3	-5	0	3 -5
2	1	9	2 1
	3	45	0

$(3 + 45 + 0) - (-10 + 0 + 27) = 31$

	i	j	k
	$3(a_x)$	$-5(a_y)$	$0(a_z)$
	$2(b_x)$	$1(b_y)$	$9(b_z)$

$(a_y b_z - a_z b_y) = i$
$(-5)(9) - (0)(1) = -45$

$+ (a_z b_x - a_x b_z) = j$
$(0)(2) - (3)(9) = -27$

$+ \quad a_x b_y - a_y b_x = k$
$(3)(1) - (-5)(2) = 13$

$(3, -5, 0) \times (2, 1, 9) =$
$(-45, -27, 13)$