

If there is a zero in one of the factors then there will always be a zero in the product.

		5	4	0
×				6
	3	2	4	0
		2		

		3	0	4
×				2
	6	0	8	

False

There is not always a zero in the product if there is zero in the factors.

		4	0	2
×				6
		8	1	2
			1	