Inference at $*$ 1 1 1
of proof for Lemma neg_mul_arg_bounds:

1. $a : \mathbb{Z}$
2. $b : \mathbb{Z}$
3. $(0 > (a * b)) \iff (((0 > a)\ \&\ (b > 0)) \vee ((a > 0)\ \&\ (b < 0)))$

$\vdash ((a * b) < 0) \iff (((a < 0)\ \&\ (b > 0)) \vee ((a > 0)\ \&\ (b < 0)))$

by (Auto_aux (first_nat 1:n) ((first_nat 1:n),(first_nat 4:n)) (first_tok :t) inil_term)

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http://www.nuprl.org/FDLcontent/p0_942988_/p121_74264_{neg_mul_arg_bounds}1_1_1.html