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Evaluation of Proof Exercise

Following the instructions for [\(linked\) Evaluation of Proofs](#) exercises (which also are posted on the course homework page), evaluate the below justification of the given conjecture.

►. **Conjecture B.** For all integers  $m$  and  $n$ , if  $mn$  is an even integer, then  $m$  is even or  $n$  is even.

*Proposed Proof.* For either  $m$  or  $n$  to be even, there exists an integer  $k$  such that  $m = 2k$  or  $n = 2k$ . So if we multiply  $m$  and  $n$ , the product will contain a factor of 2 and, hence,  $mn$  will be even. □

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