

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 1.** If n is an even integer, then $(5n + 4)$ is an even integer.

Hint. Symbolically written: $(\forall n \in \mathbb{Z}) [n \text{ is even} \implies (5n + 4) \text{ is even}]$

Proposed Proof. We see that

$$5n + 4 = 10n + 4 = 2(5n + 2). \tag{1}$$

Therefore, $(5n + 4)$ is an even integer. □

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