

**Advanced Higher Maths**  
**SQA 2017 Paper**  
**Question 13**



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Let  $n$  be an integer.

Using proof by contrapositive, show that if  $n^2$  is even, then  $n$  is even.

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Method:

Form the contrapositive statement: "If  $n$  is odd, then  $n^2$  is odd" and prove this directly.  
See marking instructions for details.