

## EVEN SO

Find some triples of whole numbers  $a$ ,  $b$  and  $c$  such that  $a^2 + b^2 + c^2$  is a multiple of 4. Is it necessarily the case that  $a$ ,  $b$  and  $c$  must all be even? If so, can you explain why?

$a^2 + b^2 + c^2$   
multiple of 4 ?  
even numbers ?