

12 (a) Prove that, for any integer m , where $m > 0$

$$(5m + 2)^2 - (5m - 2)^2 \text{ is a multiple of } 20$$

(3)

Ali says,

“80 is a factor of $(5m + 2)^2 - (5m - 2)^2$ for any integer m , where $m > 0$ ”

(b) Is Ali correct?

You must give a reason for your answer.

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(1)