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The diagram shows triangle ABC in which angle A is $60°$ and the lengths of AB and AC are $(4+h)$ cm and $(4-h)$ cm respectively.

(a) Show that the length of BC is p cm where

$$p^2 = 16 + 3h^2.$$

[2]

(b) Hence show that, when h is small, $p \approx 4 + \lambda h^2 + \mu h^4$, where λ and μ are rational numbers whose values are to be determined.

[4]