5 (a) Expand and simplify

$$(x + y)^4$$

[2 marks]

5 (b) Use your answer to part **(a)** to write down the expansion of

$$(x - y)^4$$

[1 mark]

5 (c) Show that $(x + y)^4 - (x - y)^4$ can be written as

$$kxy(x^2 + y^2)$$

where k is a constant to be found.

[2 marks]