

**Dr Oliver Mathematics**  
**Worked Examples**  
**Find  $a$  1**

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1. (a) Expand

$$(a + 1)(a + 4).$$

(b) Expand

$$(a + 2)(a + 3).$$

You are given that

$$c^2 - d^2 = (c - d)(c + d).$$

Hence, or otherwise,

(c) solve

$$(a + 1)(a + 2)(a + 3)(a + 4) = 120.$$