

**Advanced Higher Maths**  
**SQA 2023 Paper 2**  
**Question 14**



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A complex number is defined by  $w = a + ib$ , where  $a$  and  $b$  are positive real numbers.

Given  $w^2 = 8 + 6i$ , determine the values of  $a$  and  $b$ .

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Answer:

$a = 3, b = 1$