

1.1 Proof

Question Paper

Course	Edexcel IAL Maths: Pure 2
Section	1. Proof
Topic	1.1 Proof
Difficulty	Easy

Time allowed: 20

Score: /17

Percentage: /100

Question 1

In a mathematical argument, how are three consecutive integers usually denoted algebraically?

[1 mark]

Question 2

- (i) In a mathematical argument, how is an even number usually denoted?
- (ii) Similarly, how is an odd number usually denoted?

[2 marks]

Question 3

Prove that the sum of two odd numbers is even.

[2 marks]

Question 4

Explain why $(x - 3)^2 \geq 0$ for all real values of x .

[1 mark]

Question 5

Prove that the product of two even numbers is a multiple of 4.

[2 marks]**Question 6**

Use a counter-example to show that $\sqrt{(x^2)} \neq x$.

[2 marks]**Question 7**

Prove by exhausting all possible factors that 11 is a prime number.

[2 marks]**Question 8**

Prove that $k^2 - 6k + 9 > 0$ for all real values of $k \neq 3$.

[2 marks]

Question 9

Show that 0.6 can be written in the form $\frac{p}{q}$, where p and q are integers.

What does this tell you about the type of number 0.6 is?

[3 marks]