

Question 6

(25 marks)

Answer **either** 6A **or** 6B.

Question 6A

- (a) Prove that, if two triangles $\triangle ABC$ and $\triangle A'B'C'$ are similar, then their sides are proportional, in order:

$$\frac{|AB|}{|A'B'|} = \frac{|BC|}{|B'C'|} = \frac{|CA|}{|C'A'|}.$$

Diagram:

Given:

To Prove:

Construction:

Proof:

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- (b) Given the line segment $[BC]$, construct, without using a protractor or set square, a point A such that $|\angle ABC| = 60^\circ$. Show your construction lines.



