Similar Triangles

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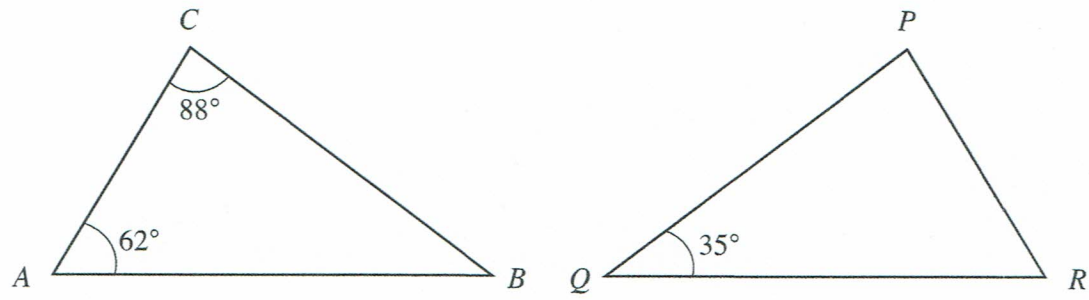
12. *(a)* Explain clearly why the following triangles are **NOT** similar.



Diagrams not drawn to scale.

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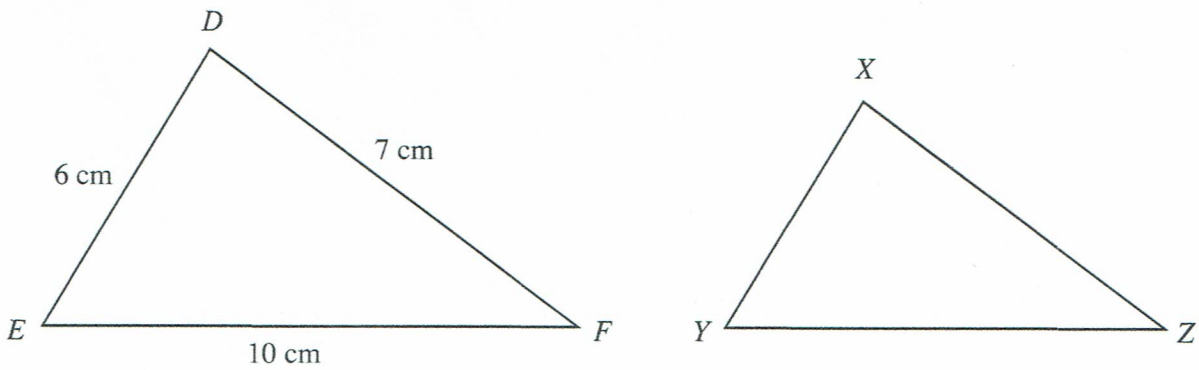
(b) Triangles *DEF* and *XYZ* are similar. Their corresponding sides are in the ratio 4:3. Calculate the length of *YZ*.



Diagrams not drawn to scale.

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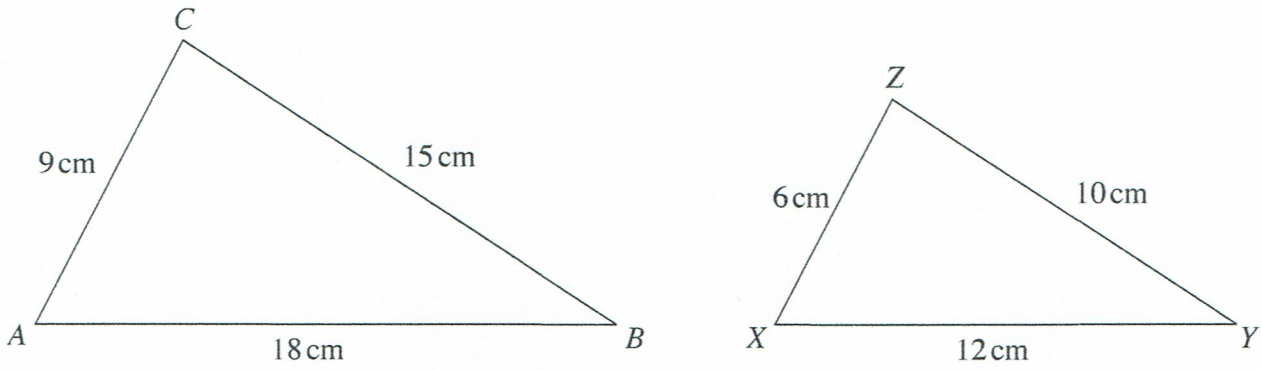
Examiner only

16. *(a)* Explain clearly why triangles *ABC* and *XYZ* are similar.



Diagrams not drawn to scale.

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(b) Triangle *PQR*, in which *PQ* = 15 cm, is similar to both triangles *ABC* and *XYZ*. Calculate the length of *QR*.

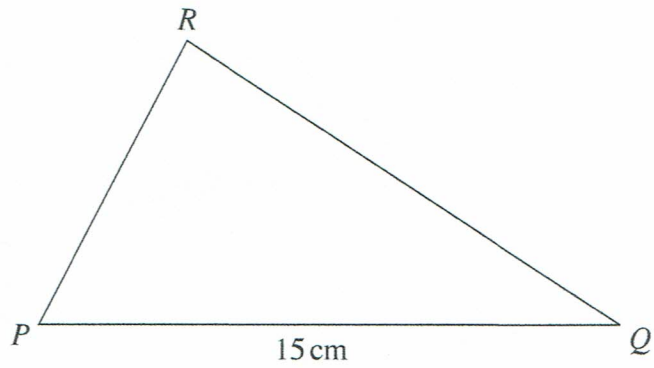

Diagram not drawn to scale.

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12. The diagram shows two similar triangles, ABC and PQR.

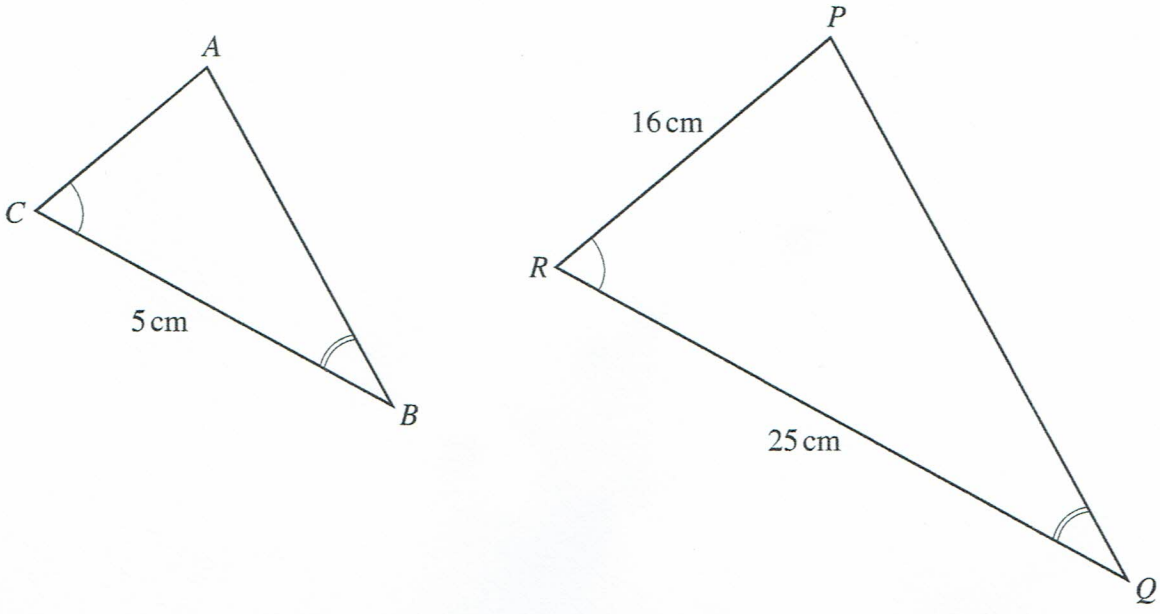

Diagram not drawn to scale.

Given that $CB = 5$ cm, $RQ = 25$ cm and $PR = 16$ cm, find the length of AC.

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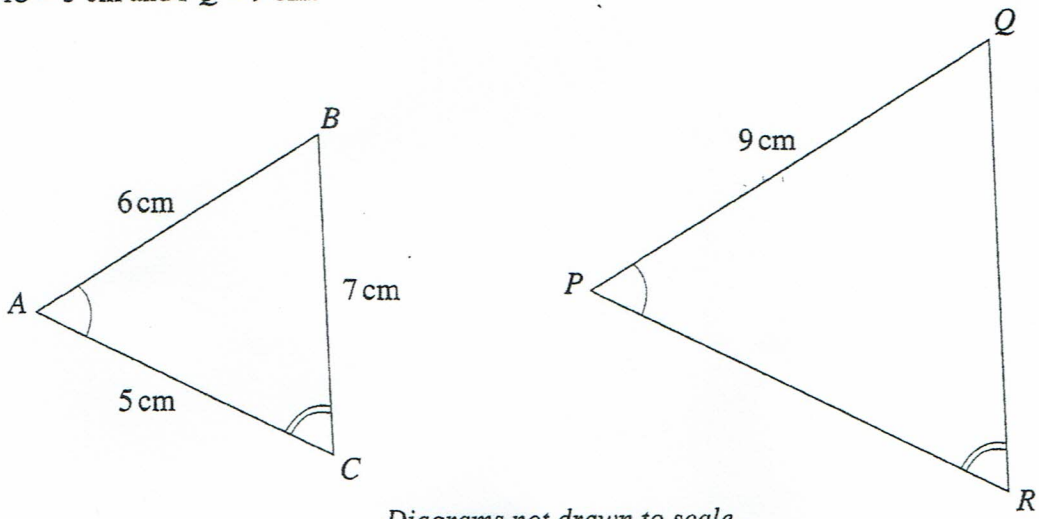
16. Triangles ABC and PQR are similar, with $\hat{BAC} = \hat{QPR}$, $\hat{BCA} = \hat{QRP}$, $AB = 6$ cm, $BC = 7$ cm, $AC = 5$ cm and $PQ = 9$ cm.



Diagrams not drawn to scale.

Showing all your working, find the length of QR.

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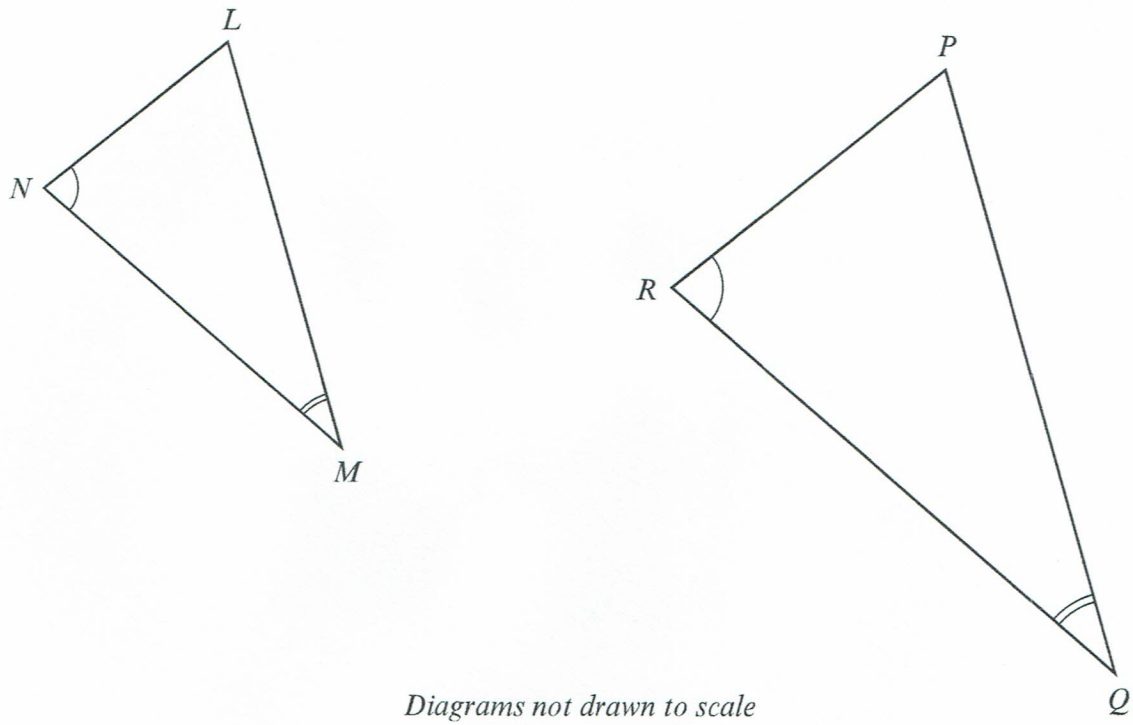
Examiner only

9. Triangles LMN and PQR are similar.



Diagrams not drawn to scale

$LM = 3\,\text{cm}$, $MN = 2{\cdot}5\,\text{cm}$, $PR = 3{\cdot}6\,\text{cm}$ and $PQ = 5{\cdot}4\,\text{cm}$.
Showing all your working, find the length of

(a) RQ,

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(b) LN.

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