23. In the diagram, PQ is parallel to ST, and the triangles PQR and TSR are similar.
The lengths $QR = 9\,\text{cm}$, $PR = 12\,\text{cm}$, $RT = 14{\cdot}4\,\text{cm}$ and $ST = 13{\cdot}2\,\text{cm}$.

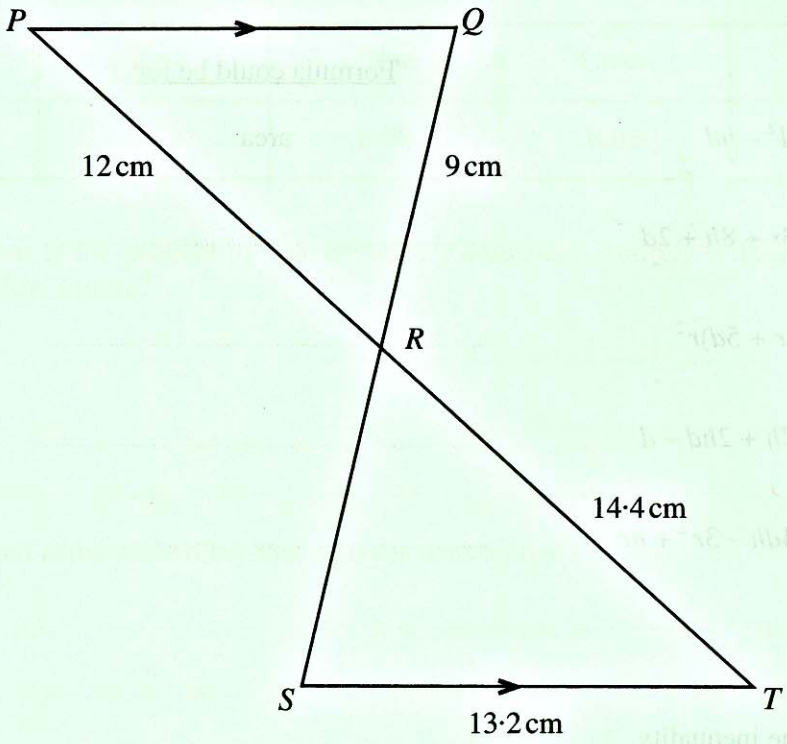

Diagram not drawn to scale.

Showing all your working, find the length of

(a) *RS,*

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[2]

(b) *PQ.*

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[2]

24.

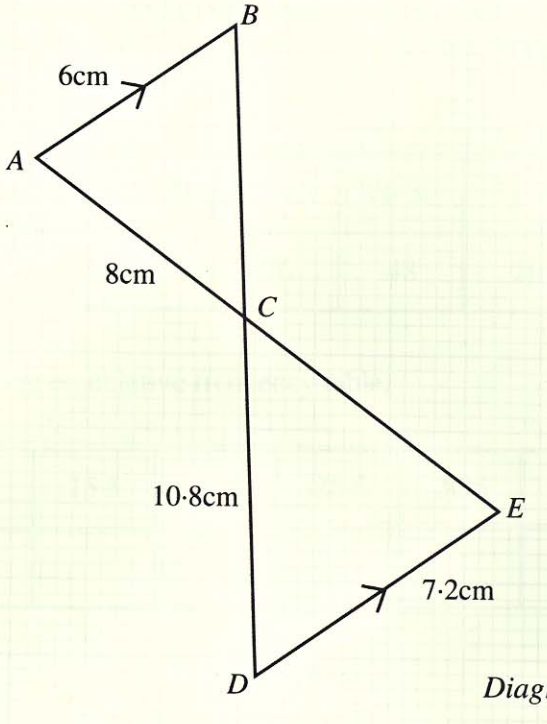

Diagram not drawn to scale.

In the diagram, AB is parallel to DE, and the triangles ABC and EDC are similar.
$AB = 6\,\text{cm}$, $AC = 8\,\text{cm}$, $DE = 7{\cdot}2\,\text{cm}$ and $CD = 10{\cdot}8\,\text{cm}$.

Showing all your working, find the length of

(a) CE,

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[2]

(b) BC.

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[2]

22.

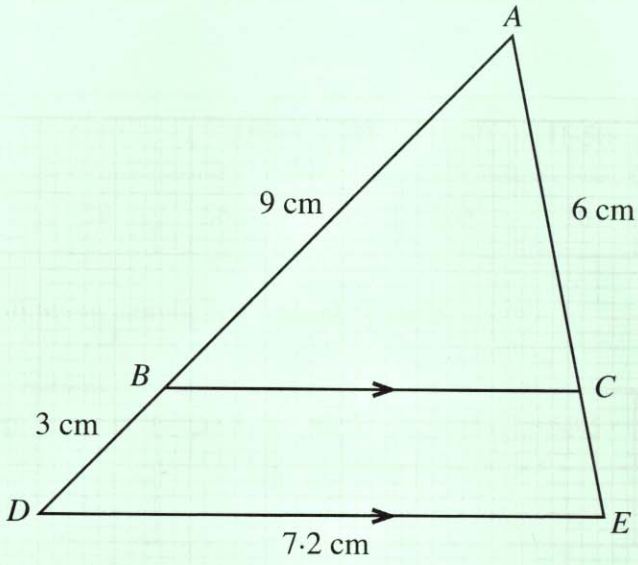

Diagram not drawn to scale.

In the diagram, BC is parallel to DE, and the triangles ABC and ADE are similar.
$AB = 9$ cm, $AC = 6$ cm, $BD = 3$ cm and $DE = 7{\cdot}2$ cm.

Showing all your working, find the length of

(a) BC,

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[2]

(b) AE.

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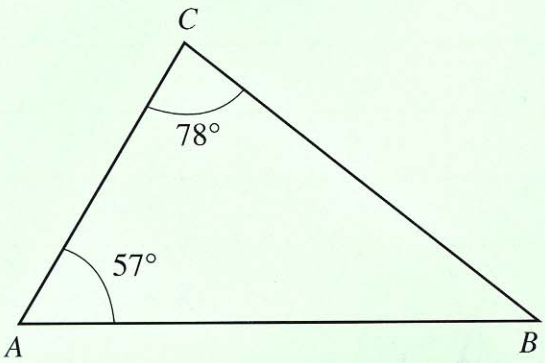
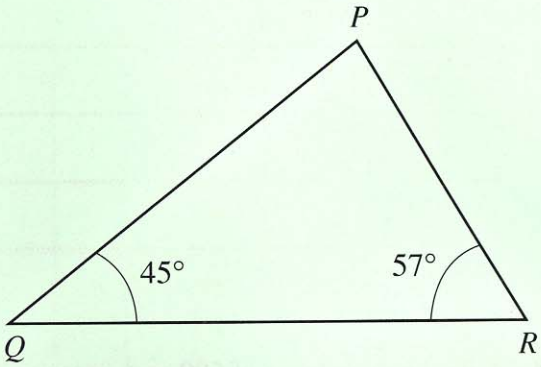
[2]

20. *(a)* Explain clearly why the following triangles are similar.





Diagrams not drawn to scale.

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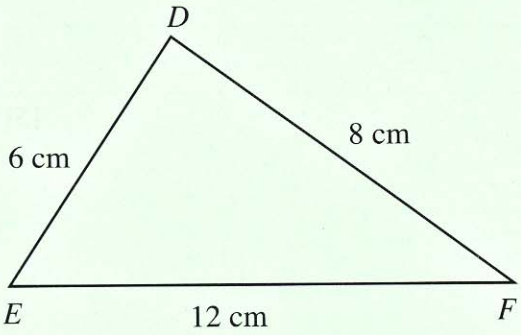
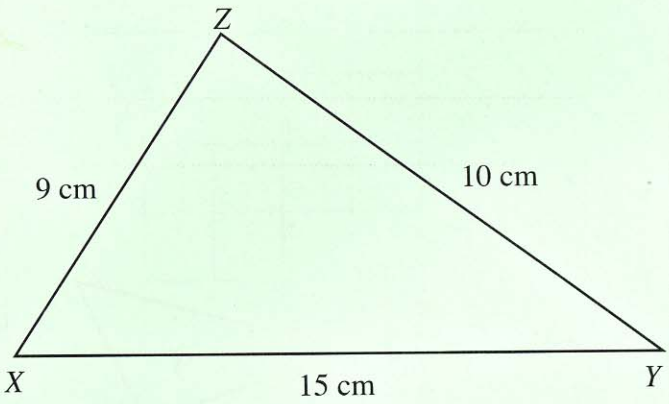
[1]

(b) Explain clearly why the following triangles are **not** similar.





Diagrams not drawn to scale.

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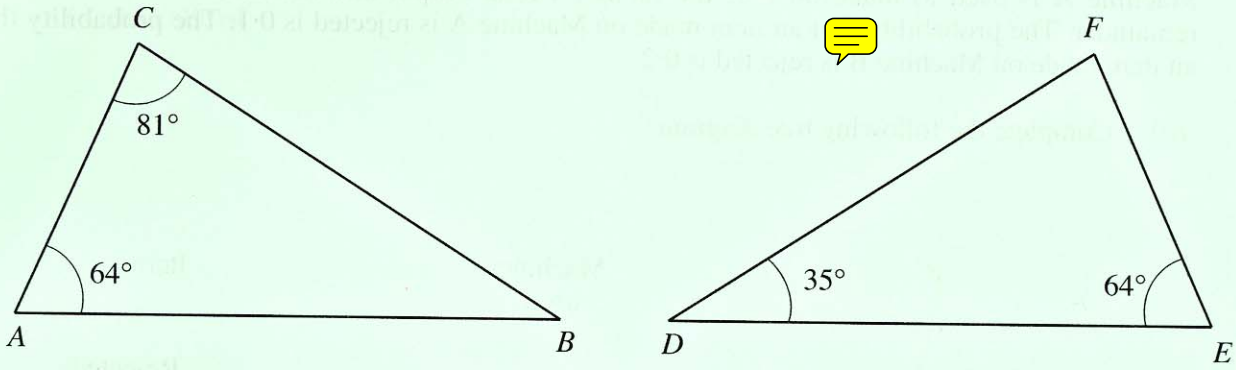
[3]

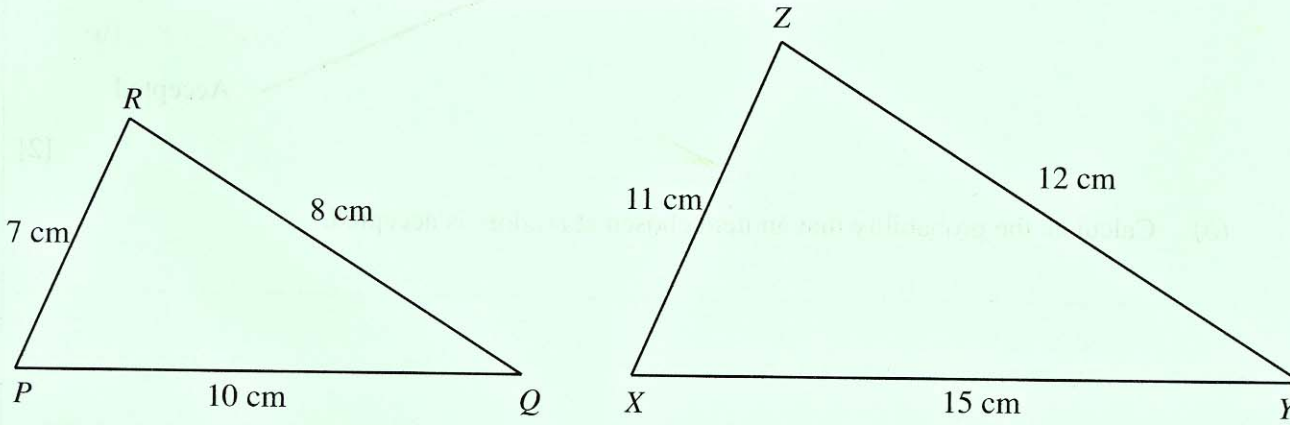
21. *(a)* Explain clearly why triangles *ABC* and *DEF* are similar.



Diagrams not drawn to scale.

[1]

(b) Explain clearly why triangles *PQR* and *XYZ* are **not** similar.



Diagrams not drawn to scale.

[3]