

12. (a)

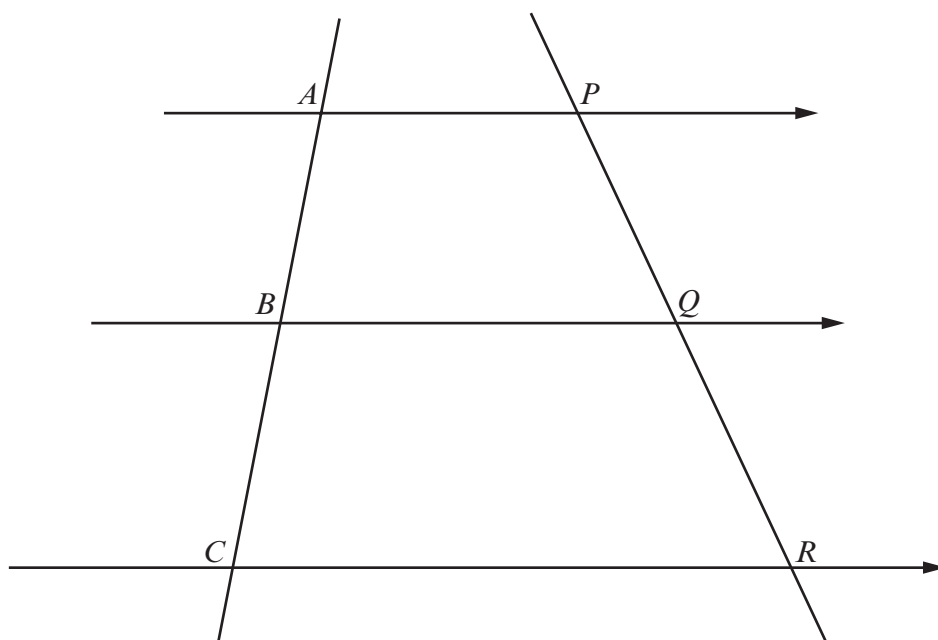


Diagram not drawn to scale

You are given that $AB = 3$ cm, $BC = 5$ cm and $PQ = 4.5$ cm.
Calculate the length of PR .

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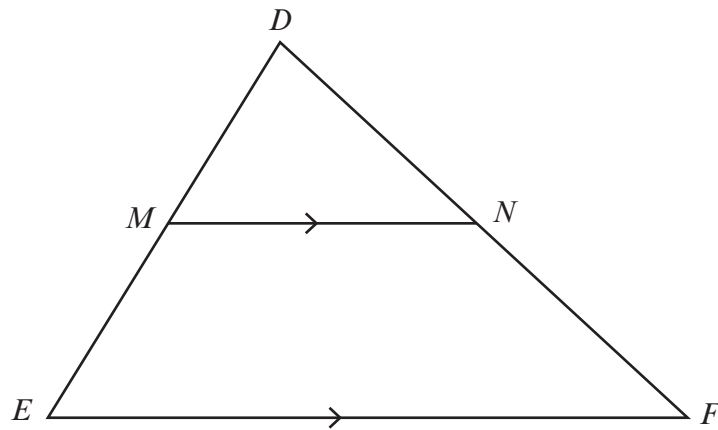
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[3]

(b)

*Diagram not drawn to scale*

You are given that $DM = 3x$ cm, $DF = 5y$ cm, $EF = 9y$ cm and that M is the mid-point of DE . Find the perimeter of triangle DMN in terms of x and y . Give your answer in its simplest form.

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[3]