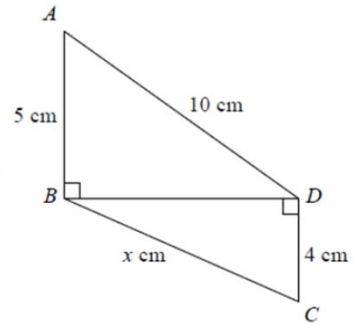
Year 11 Mathematics Learning Journey: Unit 5 - Geometry

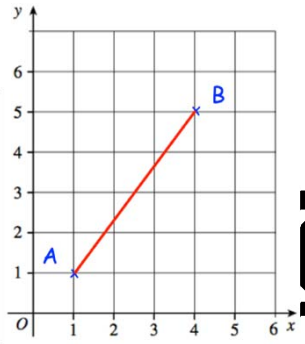
Step 1: Pythagoras and trigonometry

Triangles ABD and BCD are right-angled triangles. Work out the value of x.



Step 2: Pythagoras and trigonometry in context

Calculate the length of the line joining the points A and B.



Step 3: Exact trig ratios

State the value of $\cos 30^0$

Step 5: Vector notation

The vector $\mathbf{a} = \binom{1}{2}$. Draw the vector $3\mathbf{a}$.

Step 6: Vectors multiplied by a scalar

Are the vectors $\binom{4}{-2}$ and $\binom{8}{-2}$ parallel?

Step 7: Addition and subtraction of vectors

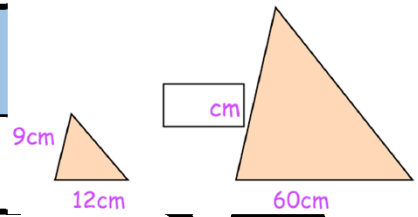
Given $\mathbf{a} = \binom{2}{7}$ and $\mathbf{b} = \binom{1}{4}$ work out $2\mathbf{a} + \mathbf{b}$ as a column vector.

Step 9: Similar and congruent shapes

Explain the difference between similar and congruent shapes.

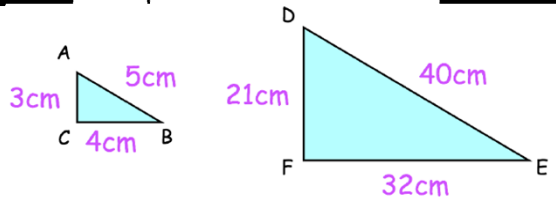
Step 10: Missing sides and angles in similar shapes

Calculate the missing length in the similar shape.



Step 11: Establish if triangles are similar

Explain why these two shapes are **not** similar.



Step 14: Conditions for congruence

What is the minimum information needed for triangles to be congruent?

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