


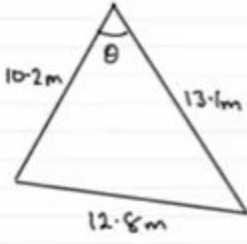


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Interact, engage and perform

Cosine rule (Finding an Angle)

Cosine Rule: Finding an angle in a triangle


$$\cos \theta = \frac{5.8^2 + 6.1^2 - 6.9^2}{2 \times 5.8 \times 6.1}$$
$$= 0.3284 \dots$$
$$\therefore \theta = \cos^{-1} 0.3284 \dots$$
$$= 70.826 \dots$$
$$\therefore \theta = 70.8^\circ \text{ (1dp)}$$

$$\cos \theta = \frac{10.2^2 + 13.1^2 - 12.8^2}{2 \times 10.2 \times 13.1}$$
$$= 0.4183 \dots$$
$$\therefore \theta = \cos^{-1} 0.4183 \dots$$
$$= 65.267 \dots$$
$$\therefore \theta = 65.3^\circ \text{ (1dp)}$$

Cosine Rule A


$$a^2 = b^2 + c^2 - 2bc \cos A$$
$$\therefore a^2 + 2bc \cos A = b^2 + c^2$$
$$\therefore 2bc \cos A = b^2 + c^2 - a^2$$
$$\therefore \cos A = \frac{b^2 + c^2 - a^2}{2bc}$$

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