

Compound angles *[18 marks]*

Let $\sin \theta = \frac{\sqrt{5}}{3}$, where θ is acute.

1a. Find $\cos \theta$.

[3 marks]

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1b. Find $\cos 2\theta$.

[2 marks]

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3. Given that $\sin x = \frac{1}{3}$, where $0 < x < \frac{\pi}{2}$, find the value of $\cos 4x$. [6 marks]

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