Guidance for tutors

<table>
<tr><td>Outcome</td><td>SPT4</td><td>Student can consistently:</td><td>Know off by heart the values of sin, cos and tan 30°, 45°, 60° and 90°.</td></tr>
<tr><td>How the topic is examined</td><td colspan="3">• Examined through test paper questions.
• This will only be tested on non-calculator papers.
• This is a new topic to the new GCSE and it is difficult to predict the questions that students could be asked.
• It is likely that these questions will be part of a non-calculator question on trigonometry as opposed to asking students to recall the values.</td></tr>
<tr><td>Prior knowledge</td><td colspan="3">• Students should be confident:
○ Rearranging simple formulae (AEx8)
○ Surds (NS3, NS5)
○ Pythagoras' Theorem (SPT1)
• In addition questions on this topic can have links to:
○ Trigonometry (SPT2,SPT3)</td></tr>
<tr><td>Suggested tuition approaches</td><td colspan="3">• Quite simply students need to remember the following table of values.</td></tr>
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Angle	0°	30°	45°	60°	90°
Sin (angle)	0	$\frac{1}{2}$	$\frac{1}{\sqrt{2}}$	$\frac{\sqrt{3}}{2}$	1
Cos (angle)	1	$\frac{\sqrt{3}}{2}$	$\frac{1}{\sqrt{2}}$	$\frac{1}{2}$	0
Tan (angle)	0	$\frac{1}{\sqrt{3}}$	1	$\sqrt{3}$	undefined

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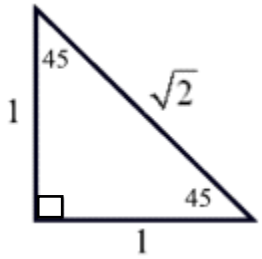
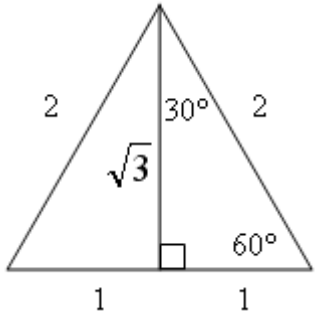
	• Students find these difficult to remember. It is easy to confuse them and so students should see where these values come from using the triangles below.  
Common errors and misconceptions	• The only mistake that students make is that they struggle to remember them or get them mixed up. Encourage them to use the above triangles to help them.
Suggested resources	• This topic is just knowledge that students need to know. Questions are not tested directly.