

## Chapter notes: 8 Circular measure and trigonometric functions

### Overview

*This is an introductory chapter to trigonometry. Although not many examination questions are likely to be set on this chapter, it provides a foundation for more advanced work. It needs approximately four teaching hours.*

### Introductory problem

This problem is designed to get students linking circular motion with right-angled triangles. The worked solution is given at the end of the chapter, page 213; the idea being that students should be able to answer the question using the methods covered in the chapter.

### 8A Measuring angles, p177

This section introduces the ideas of radians and thinking about angles using the unit circle. Although it is unlikely that examination questions will cover just this topic, it should help to develop ways of thinking (e.g. question 7) which will become very useful.

### 8B Definitions and graphs of the sine and cosine functions, p184

It is not essential to memorise the results in Key points 8.4 and 8.5. It is more important to understand how the unit circle can be used to derive them.

### 8C Definition and graph of the tangent function, p194

In SL, only the definition of  $\tan x$  as  $\frac{\sin x}{\cos x}$  is required, but the unit circle interpretation is mentioned in the 'From another perspective' box.

### 8D Exact values of trigonometric functions, p198

Key point 8.10 is worth memorising.

### 8E Transformations of trigonometric graphs, p201

You should cover chapter 5 before attempting this section.

### 8F Modelling using trigonometric functions, p208

*There are no specific teacher notes for this section.*