06
 1d
 Find the value of θ in the diagram. Give your answer to the nearest degree.

 33°

Using the sine rule:

$$\frac{\sin\theta}{5} = \frac{\sin 33^{\circ}}{9}$$

$$\sin\theta = \frac{5 \times \sin 33^{\circ}}{9}$$

$$= 0.302577241$$

$$\theta = 17.612418$$

$$= 18 \text{ (to nearest degree)} \qquad \therefore \text{ the angle is } 18^{\circ}$$

Board of Studies: Notes from the Marking Centre

Candidates are reminded of the need to know formulae and the importance of being familiar with their calculator. The vast majority of successful answers applied the sine rule showing full setting out. Candidates are reminded to read the question carefully and round off as advised. A number of candidates also wrongly assumed that the triangle was right-angled.

Source: http://www.boardofstudies.nsw.edu.au/hsc_exams/

^{*} These solutions have been provided by projectmaths and are not supplied or endorsed by the Board of Studies