

## Q1. (2017)

|   |                                                                                                                                                                                                                 |    |                                                                                   |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-----------------------------------------------------------------------------------|
| 7 | $\sin 72 = \frac{x}{8}$<br>or $8 \times \sin 72$<br>or $\cos(90 - 72) = \frac{x}{8}$<br>or $8 \times \cos(90 - 72)$<br>or $\frac{x}{\sin 72} = \frac{8}{\sin 90}$<br>or $\frac{\sin 72}{x} = \frac{\sin 90}{8}$ | M1 | oe<br>eg $8 \cos 72$ or $2.47 \dots$ or $2.5$<br>and $\sqrt{8^2 - (8 \cos 72)^2}$ |
|   | [7.6, 7.61]                                                                                                                                                                                                     | A1 |                                                                                   |
|   | <b>Additional Guidance</b>                                                                                                                                                                                      |    |                                                                                   |
|   | If trigonometry and Pythagoras are used it must be a fully correct method that would lead to the correct value of $x$                                                                                           |    |                                                                                   |
|   | Accept $\sin 72 \times 8$                                                                                                                                                                                       |    | M1                                                                                |
|   | Accept opp or o for $x$ eg $\sin 72 = \frac{\text{opp}}{8}$                                                                                                                                                     |    | M1                                                                                |
|   | $\sin = \frac{x}{8}$ or $\sin \theta = \frac{x}{8}$ (unless recovered)                                                                                                                                          |    | M0                                                                                |
|   | Answer coming from scale drawing                                                                                                                                                                                |    | M0A0                                                                              |
|   | Answer in range seen followed by 7 or 8                                                                                                                                                                         |    | M1A1                                                                              |