

| Question Number | Scheme | Marks |
|---|---|------------------------|
| 1 (a) | $\cos \theta^\circ = \frac{8^2 + 9^2 - 10^2}{2 \times 8 \times 9}$ $\theta^\circ = 71.79... = 71.8^\circ$ | M1A1 A1 cao (3) |
| (b) | $\text{Area} = \frac{1}{2} ab \sin C = \frac{1}{2} \times 8 \times 9 \sin 71.79...$ $= 34.19... = 34.2 \text{ (cm}^2\text{)} \quad (\text{Use of } 71.8 \text{ also gives } 34.2)$ | M1 A1cao (2) [5] |
| (a)M1 A1 A1cao ALT: (b) M1 A1cao | Cosine rule for any angle of the triangle; can be in either form but formula must be correct Correct numbers in the cosine rule. Must be the correct angle (ie largest) Identify $\theta = 71.8^\circ$ Must be to nearest 0.1° Find at least 2 angles by cosine and possibly sine rule. (can be any 2 of the angles) M1A1 $\theta = 71.8^\circ$ Must be to nearest 0.1° A1 Any complete method to find the area of the triangle (use any angle found in (a) with the sides enclosing it) 34.2 Must be to 3sf unless rounding already penalised in (a) | |