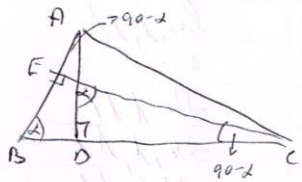
2.81
6



△ECB: $BC = \frac{n}{\sin\alpha}$

△ABD: $AB = \frac{m}{\sin\alpha}$

△ABC: $AC^2 = AB^2 + BC^2 - 2AB \cdot BC \cdot \cos\alpha$

$$AC^2 = \frac{n^2}{\sin^2\alpha} + \frac{m^2}{\sin^2\alpha} - \frac{2nm}{\sin^2\alpha}\cos\alpha$$

$$AC = \frac{1}{\sin\alpha}\sqrt{n^2 + m^2 - 2nm\cos\alpha}$$