Trigonometry – AS Mathematics P2

1. June/2022/Paper_7356/02/No.2

Given that

$$\cos(\theta - 20°) = \cos 60°$$

which one of the following is a possible value for θ?

Circle your answer.

[1 mark]

40° 140° 280° 320°

2. June/2022/Paper_7356/02/No.8

Triangle ABC has sides of length $(m-n)$, m and $(m+n)$ where $0 < 2n < m$

Angle A is the largest angle in the triangle.

(a) (i) Explain why angle A must be opposite the side of length $(m+n)$.

[1 mark]

(a) (ii) Using the cosine rule, show that $\cos A = \dfrac{m-4n}{2(m-n)}$

[3 marks]

(b) You are given that BC is the diameter of a circle, and A lies on the circumference of the circle. The value of m is 8

Calculate the value of n.

[3 marks]