

If $\sin m^\circ = 0.5$, which of the following is the value of $\cos m^\circ$?

- A. 0.85
- B. 0.87
- C. 0.78
- D. 0.67

Solution:

We'll determine $\cos m^\circ$, applying the Pythagorean trigonometric identity:

$$\cos^2 m + \sin^2 m = 1$$

$$\cos^2 m = 1 - \sin^2 m$$

$$\cos^2 m = 1 - \left(\frac{1}{2}\right)^2$$

$$\cos^2 m = \frac{3}{4}$$

$$\cos m = \frac{\sqrt{3}}{2}$$

$$\cos m = 0.87$$

Answer: **B 0.87**