**Topic**: Complementary and supplementary angles

**Question**: Find the supplementary angle.

The angle $\theta$ that's supplementary to $126^\circ$

**Answer choices**:

A $\theta = 154^\circ$

B $\theta = 36^\circ$

C $\theta = 54^\circ$

D $\theta = 180^\circ$

**Solution**: C

Since $\theta$ is supplementary to an angle of $126^\circ$ we have

$$\theta + 126^\circ = 180^\circ$$

Solving for $\theta$:

$$\theta = 180^\circ - 126^\circ$$

$$\theta = 54^\circ$$

**Topic**: Complementary and supplementary angles

**Question**: Find the complementary angle.

The angle $\theta$ (in radians) that's complementary to $\pi/6$ radians

**Answer choices**:

A $\theta = \frac{5}{12}\pi$

B $\theta = \frac{\pi}{2}$

C $\theta = \frac{5}{6}\pi$

D $\theta = \frac{1}{3}\pi$

**Solution**: D

$\theta$ and the angle of $\pi/6$ radians are complementary, so

$$\theta + \frac{\pi}{6} = \frac{\pi}{2}$$

Solving for $\theta$:

$$\theta = \frac{\pi}{2} - \frac{\pi}{6}$$

$$\theta = \left(\frac{1}{2} - \frac{1}{6}\right)\pi$$

Combining the two terms on the right-hand side by using $6$ as a common denominator, we find that

$$\theta = \left(\frac{3-1}{6}\right)\pi$$

$$\theta = \frac{2}{6}\pi$$

$$\theta = \frac{1}{3}\pi$$