

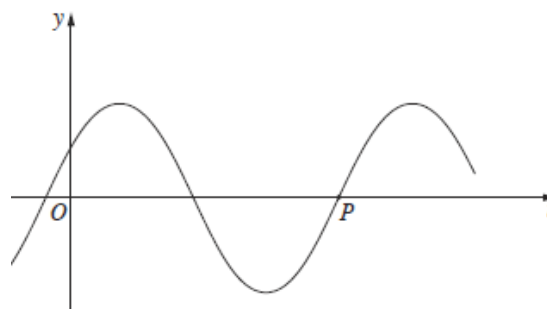
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**2015 10** The graph of the function

$$y = \cos\left(2t - \frac{\pi}{3}\right) \text{ is shown.}$$

What are the coordinates of the point  $P$ ?

- (A)  $\left(\frac{5\pi}{12}, 0\right)$       (B)  $\left(\frac{2\pi}{3}, 0\right)$   
 (C)  $\left(\frac{11\pi}{12}, 0\right)$       (D)  $\left(\frac{7\pi}{6}, 0\right)$



**1**

**C**

$$\text{Let } \cos\left(2t - \frac{\pi}{3}\right) = 0$$

$$2t - \frac{\pi}{3} = \frac{\pi}{2}, \frac{3\pi}{2}, \dots$$

$$2t = \frac{5\pi}{6}, \frac{11\pi}{6}, \dots$$

$$t = \frac{5\pi}{12}, \frac{11\pi}{12}, \dots$$

$$\therefore \left(\frac{11\pi}{12}, 0\right) \quad \text{[as 2<sup>nd</sup> positive } t\text{-intercept]}$$

State Mean:  
**0.61**

\* These solutions have been provided by [projectmaths](#) and are not supplied or endorsed by BOSTES.