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**2015 6** What is the value of the derivative of  $y = 2 \sin 3x - 3 \tan x$  at  $x = 0$ ?

**1**

(A) -1

(B) 0

(C) 3

(D) -9

**C**

$$y = 2 \sin 3x - 3 \tan x$$

$$y' = 6 \cos 3x - 3 \sec^2 x$$

$$= 6 \cos 3x - \frac{3}{\cos^2 x}$$

$$y'(0) = 6 \cos 3(0) - \frac{3}{\cos^2(0)}$$

$$= 6 \times 1 - \frac{3}{1}$$

$$= 3$$

State Mean:

**0.72**

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