

Mathematics Questions by Topics

Motion and Force

Question 6

Source: K20SM2Q19

Question 6

A body is moving in a straight line. When its displacement is x metres from the origin at time t seconds, $t = x \cos(2x)$. The acceleration in ms^{-2} is given by

- A. $\frac{-2 \sin(2x)}{\cos^3(2x)}$
- B. $\frac{4(\sin(2x) + x \cos(2x))}{(\cos(2x) - 2x \sin(2x))^3}$
- C. $\frac{4(\sin(2x) + x \cos(2x))}{(\cos(2x) - 2x \sin(2x))^2}$
- D. $\frac{1}{\cos(2x) - 2x \sin(2x)}$
- E. $-4(x \cos(2x) + 2 \sin(2x))$