

Mathematics Questions by Topics

Motion and Force

Question 21

Source: K14SM2Q21

Question 21

A particle of mass 10 kg travels in a straight line with velocity $v \text{ ms}^{-1}$ when its displacement is x metres, where $v = 2 \log_e \left(\sqrt{x^2 + 1} + x \right)$ for $x \geq 0$. The maximum force in newtons acting on the particle is closest to

- A. 1.5
- B. 2.7
- C. 20
- D. 24
- E. 26.5