

**Mathematics Questions by Topics**

Motion and Force

Question 45

Source: K7SM2Q16

**Question 45**

A particle travels in a straight line with velocity  $v$  at a time  $t$  and its displacement is  $x$ .

If  $v^2 = 9x$  for  $x > 0$ , then the acceleration of the particle is given by

- A.  $\frac{2x}{3}$
- B. 4.5
- C.  $2\sqrt{x^3}$
- D.  $6x^2$
- E.  $\frac{3}{2\sqrt{x}}$