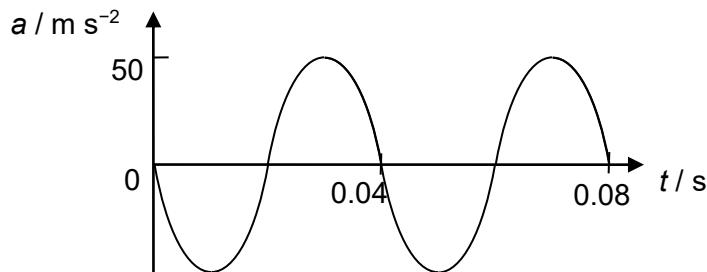


**16** A body performs simple harmonic motion with period  $T$ . The graph shows the variation with time  $t$  of its acceleration  $a$ .



What is the ratio of the body's displacement to its amplitude at time  $t = \frac{5T}{8}$ ?

**A**  $-0.71$

**B**  $0.71$

**C**  $-0.87$

**D**  $0.87$