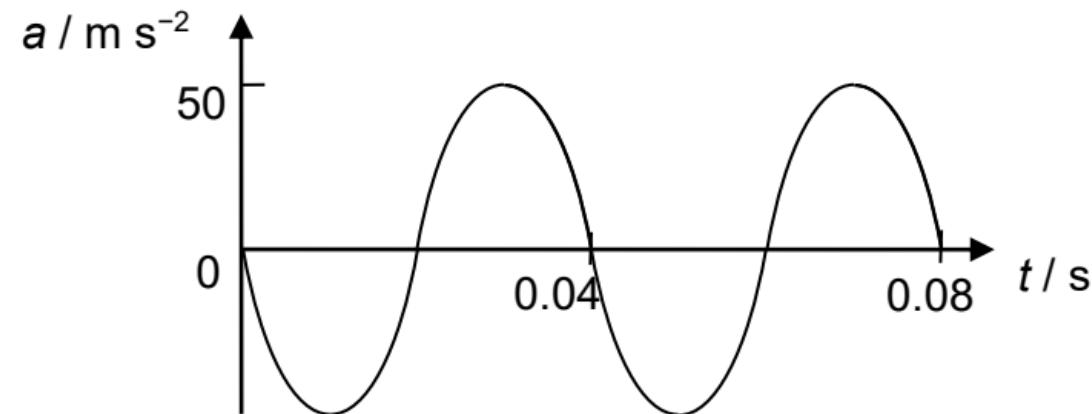


- 14 A body performs simple harmonic motion with period  $T$ . The graph shows the variation with time  $t$  of its acceleration  $a$ .



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  $0.87$

- 15 In a horizontal spring-mass system, a mass  $m$  oscillates with a frequency  $f$  and an amplitude  $x_0$ .