

**9** A part in an engine is rotating in a circle of radius 8.0 cm at 3000 revolutions per minute.  
What is its centripetal acceleration?

**A**  $25 \text{ m s}^{-2}$

**B**  $7900 \text{ m s}^{-2}$

**C**  $3.1 \times 10^4 \text{ m s}^{-2}$

**D**  $7.2 \times 10^7 \text{ m s}^{-2}$