

- 1** The maximum theoretical power  $P$  of a wind turbine is given by the equation

$$P = k \rho A v^n,$$

where  $\rho$  is the density of air,  $A$  is the area swept by the turbine blades,  $v$  is the speed of the air and  $k$  is a constant with no units.

What is the value of  $n$ ?

**A** 1

**B** 2

**C** 3

**D** 4