

- 1 A student uses the volume of a metal coin in order to determine the density of the metal.

What is **not** needed in order to determine an estimate of the volume of the coin?

- A estimate of the diameter
- B estimate of the mass
- C estimate of the thickness
- D use of the formula for the volume of a cylinder

- 2 The speed  $v$  of waves on a stretched wire is given by the equation

$$v = T^p \mu^q$$

where  $T$  is the tension in the wire and  $\mu$  is the mass per unit length of the wire.

What are the values of  $p$  and  $q$ ?

	$p$	$q$
A	$-\frac{1}{2}$	$-\frac{1}{2}$
B	$-\frac{1}{2}$	$\frac{1}{2}$
C	$\frac{1}{2}$	$-\frac{1}{2}$
D	$\frac{1}{2}$	$\frac{1}{2}$