

**AQA – Dimensional analysis – AS Further Mathematics Mechanics**

1. [June/2021/Paper\\_7366/2M/No.2](#)

State the dimensions of force.

Circle your answer.

[1 mark]

$MLT$

$ML^2T$

$MLT^{-1}$

$MLT^{-2}$

**2. June/2021/Paper\_7366/2M/No.5**

A ball is thrown vertically upwards with speed  $u$  so that at time  $t$  its displacement  $s$  is given by the formula

$$s = ut - \frac{gt^2}{2}$$

Use dimensional analysis to show that this formula is dimensionally consistent.

Fully justify your answer.

**[4 marks]**