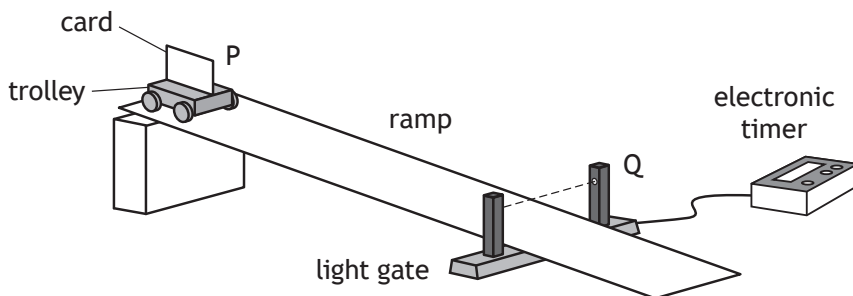


2. A student uses the apparatus shown to determine the acceleration of a trolley as it moves down a ramp.



The trolley is released from rest at point P and moves down the ramp.

A card attached to the trolley passes through a light gate at point Q.

The time for the card to pass through the light gate is displayed on the electronic timer.

The vehicle's acceleration a is determined using the relationship

$$v^2 = u^2 + 2as$$

The student makes the following statements about the terms u , s , and v :

- I $u = 0 \text{ m s}^{-1}$
- II s = the length of the card
- III $v = \frac{\text{distance between P and Q}}{\text{time displayed on timer}}$

Which of these statements is/are correct?

- A I only
- B II only
- C I and II only
- D I and III only
- E I, II and III