

- 8 In an experiment, object P moves with initial velocity  $u$  and then collides with stationary object Q.

The collision is elastic.

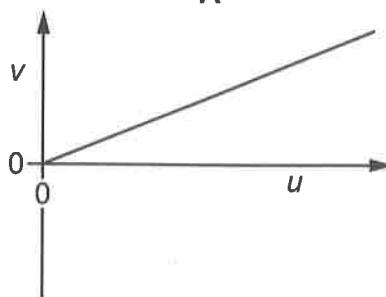
The final velocity of P is  $v_P$  and the final velocity of Q is  $v_Q$ .

The quantity  $v = v_Q - v_P$  is calculated.

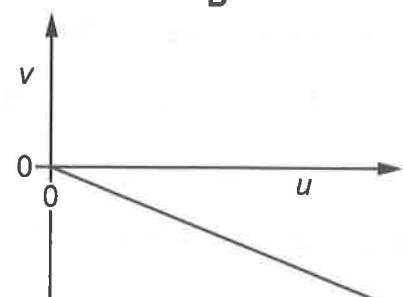
The experiment is repeated for different values of  $u$ .

Which graph represents the variation of  $v$  with  $u$ ?

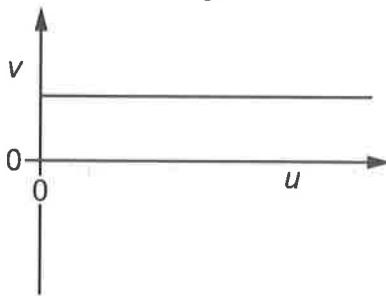
A



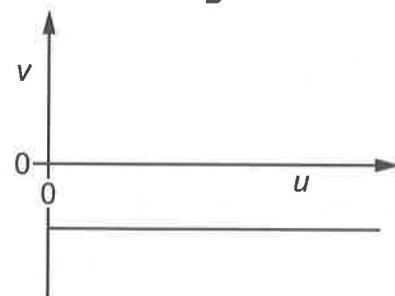
B



C



D



- 9 A motor lifts an object of weight  $W$  vertically for a time  $t$ . The motor does