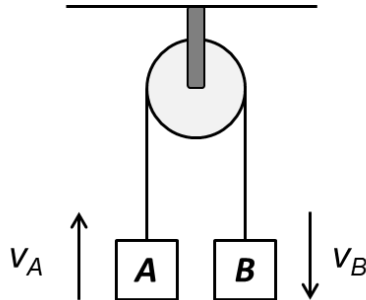


- 4 Two objects, A and B, are connected via a light string that runs over a smooth pulley.

Their masses are  $m_A$  and  $m_B$  respectively.

The diagram shows A moving up with velocity  $v_A$  and B moving down with velocity  $v_B$ .

Which statement is incorrect?



- A If  $m_A = m_B$ ,  $v_A$  and  $v_B$  are of the same magnitude.
- B If  $m_A = m_B$ ,  $v_A$  and  $v_B$  can only be zero.
- C  $m_A$  can be larger than  $m_B$ .
- D  $m_A$  can be smaller than  $m_B$ .