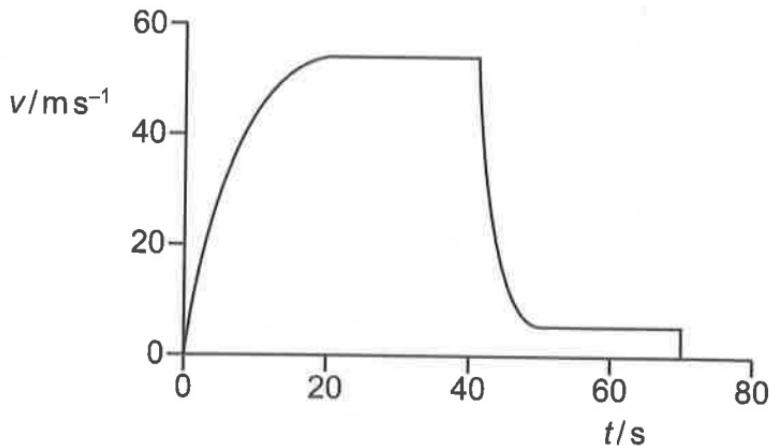


- 5 A parachutist exits an aircraft an instant before time  $t = 0$  and falls to the ground. The graph shows the variation of  $v$ , the vertical velocity of the parachutist downwards, with  $t$ .



Which statement about the magnitude of the resultant vertical force acting on the parachutist is correct?

- A The resultant force at  $t = 0$  is zero.
- B The resultant force at  $t = 15\text{ s}$  is greater than the resultant force at  $t = 10\text{ s}$ .
- C The resultant force at  $t = 30\text{ s}$  is equal to the resultant force at  $t = 60\text{ s}$ .
- D The resultant force at  $t = 60\text{ s}$  is equal to the weight of the parachutist.

- 6 A uniform rod is pivoted at point P. Figure 6 shows the rod.