

11 A body, initially at rest, explodes into two masses  $M_1$  and  $M_2$  that move apart with speeds  $v_1$  and  $v_2$  respectively.

What is the ratio  $\frac{v_1}{v_2}$ ?

**A**  $\frac{M_1}{M_2}$

**B**  $\frac{M_2}{M_1}$

**C**  $\left(\frac{M_1}{M_2}\right)^{\frac{1}{2}}$

**D**  $\left(\frac{M_2}{M_1}\right)^{\frac{1}{2}}$

12 A submarine descends vertically at constant velocity. The three forces acting on the submarine