

- 12** Two stationary particles of masses  $M_1$  and  $M_2$  are a distance  $d$  apart. A third particle, lying on the line joining the particles, experiences no resultant gravitational force.

What is the distance of this particle from  $M_1$ ?

**A**  $d\left(\frac{M_1}{M_2}\right)$

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

**C**  $d\sqrt{\frac{M_1}{M_1 + M_2}}$

**D**  $d\left(\frac{\sqrt{M_1}}{\sqrt{M_1} + \sqrt{M_2}}\right)$