

- 9** A spherical body of radius  $r$  has uniform density  $\rho$ .

What is the gravitational potential on its surface?

**A**  $-4\pi G\rho r^2$

**B**  $-\frac{4}{3}\pi G\rho r^2$

**C**  $-\frac{4}{3}\pi G\rho r$

**D**  $\frac{4}{3}\pi G\rho r^2$

- 10** Two planets X and Y travel anticlockwise in circular orbits about a star. The radii of their orbits