

- 10** An astronaut of mass m in a spacecraft experiences a gravitational force $F = mg$ when stationary on the launchpad.

What is the gravitational force on the astronaut when the spacecraft is launched vertically upwards with an acceleration of $0.2g$?

- A** $1.2mg$ **B** mg **C** $0.8mg$ **D** 0

- 11** A beam of α -particles collides with a lead sheet. Each α -particle in the beam has a mass of