

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 γ -particles collides with a lead sheet. Each γ -particle in the beam has a mass of