

- 17** On a planet, a gravitational force  $F$  acts on a mass of 6.0 kg. The mass is moved by force  $F$  a distance of 30 m in the direction of the gravitational field. The work done by the field is 450 J.

What is the force  $F$  on the mass and what is the acceleration of free fall  $g$  on the planet?

	$F/\text{N}$	$g/\text{ms}^{-2}$
<b>A</b>	0.067	0.011
<b>B</b>	0.067	0.40
<b>C</b>	15	2.5
<b>D</b>	15	90

- 18** A girl of mass 50 kg runs up a flight of 20 steps in 7.0 seconds. Each step is 25 cm high.

What is the useful average output power provided by the girl to climb the flight of steps?

- A** 18 W                      **B** 36 W                      **C** 350 W                      **D** 2500 W