

- 12** A hydroelectric power station uses the gravitational potential energy of water to generate electrical energy.

In one particular power station, the mass of water flowing per unit time is $1.5 \times 10^5 \text{ kg s}^{-1}$. The water falls through a vertical height of 140 m.

The electrical power generated is 100 MW. What is the efficiency of the power station?

A 5.6%

B 4.3%

C 49%

D 77%