15 A volume of 1.5 m^3 of water is mixed with 0.50 m^3 of alcohol. The density of water is 1000 $kg\,m^{-3}$ and the density of alcohol is 800 $kg\,m^{-3}$.

The volume of the mixture is 2.0 m^3.

What is the density of the mixture?

A 850 $kg\,m^{-3}$ **B** 900 $kg\,m^{-3}$ **C** 940 $kg\,m^{-3}$ **D** 950 $kg\,m^{-3}$

16 A parachutist is falling at constant (terminal) velocity.

Which statement is **not** correct?

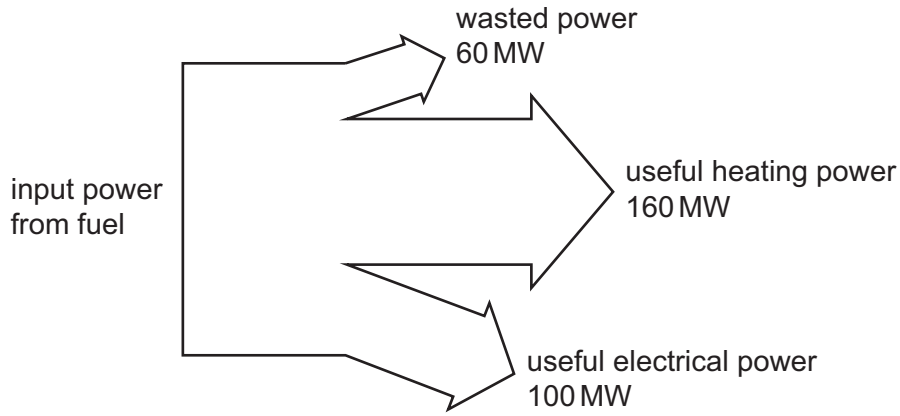
A Gravitational potential energy is converted into kinetic energy of the air.

B Gravitational potential energy is converted into kinetic energy of the parachutist.

C Gravitational potential energy is converted into thermal energy of the air.

D Gravitational potential energy is converted into thermal energy of the parachutist.

17 A combined heat and power (CHP) station generates electrical power and useful heat. The diagram shows the input and output powers for a CHP station.



What is the efficiency of the CHP station for producing useful power?

A 31% **B** 38% **C** 50% **D** 81%