

**18** An escalator in an underground station has 250 people standing on it and is moving with a velocity of  $4.3\text{ ms}^{-1}$ . The average mass of a person is 78 kg and the angle of the escalator to the horizontal is  $40^\circ$ .

What is the minimum power required to lift these people?

**A** 54 kW

**B** 64 kW

**C** 530 kW

**D** 630 kW

**19** An electric motor operating a lift has an output power of 20 kW.