

- 18** An escalator in an underground station has 250 people standing on it and is moving with a velocity of  $4.3 \text{ m s}^{-1}$ . 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.