Mark schemes

Q1.

(a) work done = force × distance

or

$W = F \times s$

1

(b) $35 = F \times 2.8$

1

$$F = \frac{35}{2.8}$$

1

$F = 12.5$ (N)

allow 13 (N)

1

(c) the resistive force has decreased

allow friction (between the wheels and the floor) has decreased

1

so the resultant force increases

1

[6]

Q2.

(a) work done = force × distance

or

$W = Fs$

allow any correct rearrangement

1

(b) $s = 7500$ (m)

1

$W = 4000 \times 7500$

allow correct substitution using incorrectly / not converted value of s

1

$W = 30\ 000\ 000$ (J)

allow correct calculation using incorrectly / not converted value of s

1

[4]