

- M1.** (a) (i) not moving 1
- (ii) straight line from origin to (200,500)
ignore a horizontal line after (200,500) 1
- (b) 35 000
allow 1 mark for correct substitution, ie $14\,000 \times 2.5$ provided no subsequent step
an answer of 87 500 indicates acceleration (2.5) has been squared and so scores zero 2
- [4]**

- M2.** (a) (i) **E-F** (ticked) 1
- (ii) **B-C or D-E**
accept both answers 1
- (b) fast(er) 1
accept downhill
- slow(er) 1
- force 1
*do **not** accept distance*
- [5]**

- M3.** (a) (i) walking at constant speed

- 1
- (ii) standing still 1
- (b) is higher **or** faster 1
accept less time to walk more distance (both time and distance must be mentioned)
- the slope of graph is steeper 1
accept slope is more
- (c) speed = $\frac{\text{distance}}{\text{time}}$ 1
accept suitable symbols used in correct formula
do not accept a triangle

[5]

- 1
- (b) $5\frac{1}{2}$ hours
must include unit 1
- (c) 30 1
- (d) 30 minutes or
 $\frac{1}{2}$ hour
must include unit 1
- (e) D and E
accept finish for E
accept correct numbers from axes with units 1
- least steep part of the graph
accept covers smallest distance in a set time
accept only moves 5 km in 1 ½ hours (accept anything between 5 and 6)
ignore horse is tired 1

[6]

M5. (a) (i) 12

1

(ii) 0.2

allow 1 mark for their (a)(i) ÷ 60 and correctly calculated

1

m/s²

accept correct unit circled in list

accept ms⁻²

*do **not** accept mps²*

1

(b) **B**

1

[4]

- M6.** (a) shallowest slope/ gradient
accept smallest distance in biggest time
accept longest time to travel the same distance
accept the line is not as steep
accept it is a less steep line
*do **not** accept the line is not steep* 1
- (b) **A – B**
If 2 or 3 boxes are ticked no mark 1
- (c) (i) 200 m 1
- (ii) 20 s
allow 1 mark for correctly identifying 60 s or 40 s from the graph 2
- (d) (i) straight line starting at origin
accept within one small square of the origin 1
- passing through $t = 200$ and $d = 500$ 1
- (ii) 166
accept any value between 162 and 168
accept where their line intersects
given graph line correctly read ± 3 s 1

[8]