

**M1.**

- (a) (10, 20.8), (20, 21.6), (30, 22.4) and (40, 23.2) plotted

**B1**

Straight line through their points

*ft line of best fit following plotting error***B1ft**

- (b) [19.9, 20.1]

**B1**

- (c)
- Alternative method 1**

21.2 or 22.8

**M1**

1.6

*ft their graph***A1ft****Alternative method 2** $(20.8 + 21.6) \div 2$  or 21.2

or

 $(22.4 + 23.2) \div 2$  or 22.8**M1**

1.6

**A1****Alternative method 3** $23.2 - 21.6$ 

or

 $22.4 - 20.8$ 

or

 $21.6 - 20$ 

or

 $(22.4 - 21.6) \times 2$ 

or

 $(23.2 - 22.4) \times 2$ *Finds the difference for any two masses 20 kg apart*

or

*Doubles the difference for any two masses 10 kg apart***M1**

1.6

A1

[5]

M2.(a) -4, 2, 8

*B1 for two correct*

B2

(b) Two of their points plotted correctly  
*ignore incorrect points*

M1

Fully correct straight ruled line from (-2, -4) to (2, 8)

A1

**Additional Guidance**

Lines must be clearly drawn with a ruled line

(c) 3

B1

**Additional Guidance** $\frac{3}{1}$  on answer line is B1

[5]

M3.(a)  $y = 1.5x + 3$ oe  $3x + 2y = 6$

B2  $y = 1.5x + 3$

B2  $-1.5x + 3$

B2  $y = -1.5x + c$

B1  $y = mx + 3$

B1  $y = 1.5x + c$

B1  $1.5x + 3$

B1  $-\frac{3}{2}$  oe

B3

(b)  $y = 3x - 9$  oe

B1  $y = 3x + c; c \text{ not } 4$

B1  $3x - 9$

B1  $-3 = 3 \times 2 + c$

B2

[5]

M4. (a)  $C = 10d + 20$

B1

(b) Plots at least two correct points ( $\pm \frac{1}{2}$  sq)

M1

Correct line from (0, 30) at least to intersection at (5, 70)

A1

(c) First Cars

*Strict ft*

B1 ft

Cheaper (check graph) Graph lower down Roys Rentals = 90 and First Cars = 86

oe

B1 ft

[5]

M5. (a)  $C = 8d + 16$

*Last one*

B1

(b) Plots graph ... at least two correct coordinates for  $C = 9d + 11$

*Works out costs for at least 2 days for Woods Tool Hire ...  
20, 29, 38, 47, 56 ... (minimum of 2 of these)*

M1

Correct straight line to intersection at (5, 56)

*Identifies equal cost for 5 days*

A1

No ticked with valid statement No may be implied

*eg cheaper up to 4 days, equal costs for 5 days, more  
expensive for 6 days onwards*

A1

#### Alternative method 1

$$8d + 16 = 9d + 11$$

M1

$$d = 5$$

A1

No ticked with valid statement No may be implied

*eg cheaper up to 4 days, equal costs for 5 days, more  
expensive for 6 days onwards*

A1

#### Alternative method 2

$$9 \times \text{their } d + 11$$

$$\text{their } d \geq 5$$

M1

Correct calculation

A1

Corresponding correct value from Branch Tool Hire **and** No ticked No may be implied

*From graph or using correct formula*

A1

[4]

**M6.** Gradient = 2 or  $y = 2x + c$

*m = 2 earns this mark*

M1

Substituting  $x = 250, y = 620$  or  $x = 400, y = 920$

M1 dep

$c = 120$  or  $C = (0, 120)$

A1

$D = (-60, 0)$

A1

**Alternative method**

Sight of 150 and 300 or ratio 1 to 2

M1

Finds an intermediate point between  $B$  and  $C$  eg  $(100, 320), (200, 520)$

*This point implies M2*

M1 dep

$C = (0, 120)$

A1

$D = (-60, 0)$

A1

[4]

