

**M1.**

(a) 5 (hours) seen

**B1**their  $5 \times 6 + 8$ **M1**

38

*ft their number of hours*  
*SC2: 44 with no working*

**A1ft**(b)  $23.75 - 3 \times 6$ 

oe

**M1**

5.75

SC1 124.50

**A1****[5]****M2.(a)**  $f - 2 = 3g$ oe or  $\frac{f}{3} = g + \frac{2}{3}$ **M1**

$$g = \frac{f - 2}{3}$$

oe or  $g = \frac{f}{3} - \frac{2}{3}$ 

$$\text{SC1 } g = \frac{f + 2}{3} \text{ or } g = 3(f - 2)$$

**A1**(b)  $4x^2$  or  $-x^3$ **M1**

$$4x^2 - x^3$$

*Do not ignore further working*

A1

[4]

**M3.(a)**  $(5 \times 5 =) 25$

or  $(5^2 =) 25$

M1

78.5(...)

*Accept 79 with working seen*

A1

(b) Divide by 3.14 or  $\pi$

Square root

*B1 for reversed order*

*or one step only in correct position*

B2

[4]

**M4.(a)**  $2 \times 5$  and  $2 \times 8$  or  $(5 + 8) \times 2$

or 10

or 16

*10 must come from  $2 \times 5$  (not  $2 + 8$ )*

M1

26

A1

$$(b) \quad 20 = l + l + 3 + 3 \text{ or } (20 - 2 \times 3) \div 2$$

$$\text{oe } 10 = l + 3 \text{ or } 20 \div 2 - 3$$

M1

7

May be seen on diagram if no answer given

A1

[4]

**M5.**  $2a + 2c = 5a - 5b$

or  $2a + 2c = 5(a - b)$

M1 if **one** expansion, sign or rearrangement error on any line

$$2c = 5a - 2a - 5b$$

or  $2c = 5(a - b) - 2a$

-2c = is OK if rest correct

M2

$$c = \frac{3a - 5b}{2}$$

or equivalent expression

ft on one error

Must have  $c =$  on answer line

If question simplified by an incorrect expansion  $2a + c$  to give  $c = \dots$  (see exemplar below) then they must simplify their answer

Do not award if incorrect further work

A1ft

### Alternative Method

$$a + c = 2.5(a - b)$$

$$c = 2.5(a - b) - a$$

M1 if **one** expansion, sign or rearrangement error on any line

M2

$$c = 2.5(a - b) - a$$

*ft on one error*

or equivalent expression

*Must have c = on answer line*

*Do not award if incorrect further work*

A1ft

[3]

**M6.(a)**  $3 \times 18 + 110$

M1

$$164$$

A1

(b)  $240 - 150 (= 90)$

*oe*

*Correctly evaluated trial*

*e.g.  $1 \times 18 + 150 = 168$*

M1

$$\frac{\text{their } 90}{18}$$

*A different correctly evaluated trial, e.g.*

$$2 \rightarrow 186$$

$$3 \rightarrow 204$$

$$4 \rightarrow 222$$

$$6 \rightarrow 258$$

M1dep

$$5$$

*SC1 for 13.3(...) or 13*

A1

[5]

**M7.(a)** 25

**B1**

(b)  $2n + 1$

oe

Accept  $n \times 2 + 1$  or  $n + n + 1$

Do not accept  $n^2 + 1$

Do not ignore fw, mark final answer

**B1**

(c)  $(49 - 1) \div 2$

oe

$24 \times 2 + 1 = 49$

**M1**

24

SC1 for 25 or 96 or 48.5

**A1**

**[4]**

**M8.(a)**  $3 \times 18 (+) 1.2 \times 110$

or  $54 (+) 132$

oe

**M1**

186

186.00

**A1**

(b)  $235 - 1.2 \times 150 (= 55)$

or  $235 - 180$

oe

$$235 = 22n + 1.2 \times 150$$

M1

their 55  
22

$$235 - 1.2 \times 150 = 22n$$

$$235 = 2.5 \times 22 + 1.2 \times 150$$

M1dep

2.5

Accept 2 hour 30 minutes, 2.30, 2:30

Ignore incorrect units

A1

[5]

M9.(a)  $-3.625$  or  $-3\frac{5}{8}$  or  $\frac{29}{8}$

B1

(b)  $2x(2x + 3y)$

B1 for partial factorisation

i.e.  $2(2x^2 + 3xy)$

$x(4x + 6y)$

$4x(x + 1.5y)$

Do not ignore fw

B2

[3]

M10.  $3 \times 10^2$  or 100 seen

M1

300

SC1 900

A1  
[2]M11.(a)  $3 \times 10^2$  or 100 seen

M1

300

SC1 900

A1

(b) Julie

B1

 $m$  must be mentioned, egShould have  $\sqrt{m}$  as well as  $\sqrt{E}$ or  $mv^2$  is not  $(mv)^2$ **NB** reference may be made to the box, so error could be indicated there

This mark is independent so can be awarded even if Phil ticked

B1  
[4]M12.(a)  $A = w^2$ *Do not ignore further working*or  $A = w \times w$ or  $\sqrt{A} = w$ 

B1

(b)  $V = w^3$

*Do not ignore further working*

or  $V = w \times w \times w$

or  $V = w^3$

or  $\sqrt[3]{V} = w$

**B1**

(c)  $\sqrt{20}$  seen

*oe eg decimals*

**M1**

their  $(\sqrt{20})^3$

*oe eg decimals*

or  $20 \times$  their  $\sqrt{20}$

*Accept  $40 \times \sqrt{5}$*

**M1 dep**

[89.3, 91.2] or  $40 \sqrt{5}$  or  $\sqrt{8000}$

*Accept  $20\sqrt{20}$*

**A1**

**[5]**

**M13.**  $4 \times -2 (+) 3 \times 5$  or  
 $-8$  or  $15$

*oe*

**M1**

7

**A1**

**[2]**

**M14.**  $x^2$



$$x \times x$$

B1

$$y^3$$

$$y \times y \times y$$

B1

[2]

M15.(a) 
$$\frac{4(6)+3(-1)}{6- -1}$$

or 
$$\frac{24-3}{6+1}$$

oe

M1

21 on numerator or 7 on denominator

M1

3

A1

[3]