

M1.

$$9 + 3x + x - 5 + 2x$$

$$\text{or } 6x + 4$$

$$\text{or } 3x + x - 5 + 2x$$

$$\text{or } 6x - 5$$

oe

M1

$$\text{Their } (6x + 4) = 100$$

$$\text{or their } 6x - 5 = 91$$

$$\text{or } 6x = 96$$

oe

$$\frac{9}{\text{their } (6x + 4)} = \frac{9}{100}$$

M1

$$x = 16$$

A1

$$\frac{11}{100}$$

ft their 16

B1ft

[4]

M2.

$$(a) \quad 4x - 5 = 15$$

$$4 \times 5 - 5 = 15$$

$$\text{or } 4 \times 5 = 20$$

M1

$$4x = 15 + 5$$

$$\text{or } 4x = 20$$

oe

M1dep

Strand (ii)

SC2 Answer 5 without algebra shown

Q1

(b) $5y - 7 = y + 3$

M1

$5y - y = 3 + 7$

or $4y = 10$

oe

M1

(y =) 2.5

A1

their 2.5 + 3

or 5 × their 2.5 - 7

or 5.5

or 5.5 × 15

oe

ft their y if clearly shown

M1

82.5

A1

Additional Guidance $4 \times 2.5 = 10$, 2.5 + 3 embedded value for y

M1M1A1M1A0

[8]

M3.

$2x + 2x - 10 + x + 25 + 2x + 30$

or $ax + 45$

or $7x + b$

Allow one error in **their** 7 terms

oe

$25 + 30 - 10$ or 45

M1

$$2x + 2x - 10 + x + 25 + 2x + 30 = 360$$

$$\text{or } 7x + 45$$

$$\text{or their } ax + 45 = 360$$

$$\text{or their } 7x + b = 360$$

oe

$$360 - \text{their } 45 \text{ or } 315$$

M1dep

$$7x + 45 = 360$$

oe

$$\text{their } 315 \div 7$$

M1dep

$$45$$

A1

Additional Guidance

$x = 45$ with no working

M3A1

$$45 + 315 = 360, \frac{315}{7} = 45$$

M3A1

$2x = 90, x = 45$ (no incorrect working seen)

M3A1

$$360 - 45 = 215, \frac{215}{7} = 30.714$$

M3A0

$$45 + 215 = 360, \frac{215}{7} = 30.714$$

M3A0

Embedded answer

M3A0

Beware of $25 + 30 - 10 = 45$

M1

[4]

M4.

(a) $x + 10$

QWC Strand (i) – Correct notation

Q1

- (b) $3x + 2 \times \text{their } (x + 10) = 95$
 oe $3x + 2x + 20 = 95$
 $5x + 20 = 95$
 ft their $x + 10$

B1ft

- (c) Their $(5x + 20) = 95$
Simplification of their equation (from at least two terms in x)
May be in part (b)

$(95 - \text{their } 20) \div \text{their } 5$
Their 5 cannot be 1

M1

15

A1

[4]

M5.

- (a) $4x$ seen

M1

$4x + 20$

SC1 for $x4 + 20$

A1

- (b) $4x + 20 = 2.5x + 35$

M1

$1.5x = 15$

Combining like terms. Allow one error.

M1 Dep

$x = 10$

A1

Alternative

One attempt at total cost for any number of slabs for both companies

$$\text{eg, } 6 \times 4 + 20 = 44 \text{ and } 6 \times 2.5 + 35 = 50$$

M1

An attempt for between 8 and 12 slabs

eg, following 6 above

$$8 \times 4 + 20 = 52 \text{ and } 8 \times 2.5 + 35 = 55$$

M1

10

$$\text{SC1 for } 5 \times 4 + 20 = 40$$

$$\text{and } 2.5 \times 2 + 35 = 40$$

A1

[5]