

M1.

(a) $\frac{1}{3.5}$

M1

$\frac{2}{7}$

oe fraction

A1

(b) **Alternative method 1**

$120\,000 \times (1 + 2.5)$

M1

420 000

A1

Alternative method 2

$120\,000 \div \frac{\text{their } 2}{\text{their } 7}$

or

$120\,000 \div \frac{\text{their } 1}{\text{their } 3.5}$

where fraction in (a) is of the form $\frac{m}{n}$

$m > 1$

where fraction in (a) is of the form $\frac{1}{n}$

M1

420 000

ft their answer from part (a)

A1ft

[4]

M2.(a) $x + y = 180$

oe

$y = 180 - x$

or $x = 180 - y$

$$\text{or } 2x + 2y = 360$$

B1

(b) $y = 1.5x$

oe

$$2y = 3x$$

$$\text{or } y = \frac{3}{2}x$$

$$\text{or } x = \frac{2}{3}y$$

$$\text{or } \frac{x}{y} = \frac{2}{3}$$

$$\text{or } \frac{y}{x} = \frac{3}{2}$$

B1

[2]

M3.

(a) $180 \div (4 + 1)$ or $180 \div 5$ or 36

or

$$\frac{1}{5} \times 180 \text{ or } \frac{4}{5} \times 180$$

M1

144

A1

(b) Their $144 \div 180$ or $4 \div 5$ or 0.8

or

$$\frac{\text{their } 144}{180} \text{ or } \frac{4}{5}$$

M1

80

ft their (a)

A1ft

[4]

M4.

(a) $280 \div 4$

Kiwi = 70

M1

Yogurt = 210

ft 280 – their 70.

Allow their 70 × 3 if M1 awarded

SC1 for 35 and 105

A1

A1ft

(b) $\frac{1}{4 + 1 + 3} \times 100$
 oe $\frac{70}{280 + 70 + 210} \times 100$

ft their weights

M1

12.5

ft their weights

A1 ft

(c) (i) $72 \times \frac{30}{100} (= 21.6)$
 oe

M1

72 + their 21.6 or 22

M1 Dep

93.6

A1

94 pence or £ 0.94

Strand (i) – Correct money notation

ft their 93.6 rounded to nearest integer

Q1

Alternative

1.3 seen

M1

72 × 1.3

M1

93.6 or 94

A1

94 pence or £0.94

Strand (i) – Correct money notation ft their 93.6 rounded to nearest integer

SC3 for 93p with no working

Q1

(ii) $0.4 \times 15 (= 6)$

78 implies this mark

M1

$$\frac{\text{their } 6}{72} \times 100 \text{ or } \frac{78}{72} \times 100$$

$$\frac{15}{72} \times 100 (= 20.83) \text{ and}$$

$$\frac{15 + 6}{72} \times 100 (= 29.16)$$

M1

8.3....

A1

Organised response

Strand (ii) – present a logical mathematical argument with key steps clearly shown

Dep on M2 awarded

Q1

[13]

M5. $(550 - 250) \div 3$

$$J + W = 250 \text{ or } J + 4W = 550$$

M1

100

$$3W = 300 \text{ or } W = 100$$

A1

250 – their 100

$$100 + J = 250 \text{ or } 400 + J = 550$$

M1dep

150

150

A1

Alternative Method 1

$$\frac{4}{5} - \frac{1}{5} (= \frac{3}{5})$$

M1

their $\frac{3}{5} = 300$ or $\frac{1}{5} = 100$

A1

250 – their 100

M1dep

150

A1

Alternative Method 2

550 marked by top division **and** 250 marked by bottom division on **same** diagram

M1

300 indicated as difference on diagram or 350 and 450 written by intermediate divisions

100 marked between any two divisions is M1, A1

A1

150 marked at bottom

M1dep

150 stated as answer

A1

Alternative Method 3

Guesses a value for weight of jug, subtracts from 250, multiplies answer by 4 and adds to their value

M1

Correct calculations

A1

Guesses a second value for weight of jug nearer to 150 and **correctly** calculates all values

M1dep

150

A1

[4]

M6.(a) $\frac{152}{200} \times 100$ or $\frac{48}{200} \times 100$
76 or 24 seen or implied

or $\frac{76}{100}$ or $\frac{24}{100}$

M1

76 and 24 seen or implied

A1

Bar drawn in correct position and shaded (Shop at the bottom) with correct height, division and width

$\frac{1}{2}$
 $\pm \frac{1}{2}$ small square
 ft their 76 or 24 but bar must total 100%
 SC2 bar wrong way round

B1ft

(b) 1 : 4

B1 20 : 80 oe
 B1 a : b with its correct simplest form
 SC1 4 : 1

B2

(c) $\frac{3}{4}$

oe fraction eg $\frac{75}{100}$

B1

[6]

M7. $\frac{18}{25}$ ($\times 100$) (= 72(%)) or $\frac{72}{100}$

or $18 \div 25$ or 0.72 oe

Working with marks lost

$\frac{7}{25}$ ($\times 100$) (= 28(%)) or $\frac{28}{100}$

or $7 \div 25$ or 0.28 oe

M1

$\frac{30}{40}$ ($\times 100$) (= 75(%)) or $\frac{75}{100}$

or $30 \div 40$ or 0.75 oe

$\frac{10}{40}$ ($\times 100$) (= 25 (%)) or $\frac{25}{100}$

or $10 \div 40$ or 0.55 oe

Note: 18×8 and 30×5 implies M2

M1

Test B and correct pair compared

(30 out of 40)

e.g.

0.72 and 0.75

72 and 75

144 and 150 (marks out of 200)

28 and 25 (% incorrect)

A1

Alternative Method

$18 \div 25$ or $30 \div 40$

M1

$18 \div 25 \times 40$ or $30 \div 40 \times 25$

M1

Test B and correct pair compared

(30 out of 40)

e.g.

28.8 (and 30)

or 18.75 (and 18)

A1

[3]

M8.(a) $1.5 + 7.5 (= 9)$

9 seen as denominator

M1

$$\frac{1.5}{\text{their } 9} \text{ or } \frac{3}{18}$$

oe

M1dep

$$\frac{1}{6}$$

0.16... or 0.17 implies M1M1A0

$$\text{SC2 } \frac{5}{6}$$

$$\text{SC1 } \frac{1}{5} \text{ or } \frac{4}{5}$$

A1

(b) 12 litres = 75%

oe

$$3(2 + x) = 12 \text{ or } 6 + 3x = 12$$

or $12 \div 3$

$$\frac{x+2}{x+2+12} = \frac{1}{4} \text{ or } 4(x+2) = x+2+12$$

$$\text{or } 4x + 8 = x + 2 + 12$$

$$\frac{B}{B+12} = \frac{1}{4} \text{ or } 4B = B + 12$$

M1

4 litres = 25%

$$\text{or } 4 \text{ litres} = \frac{1}{4}$$

or 16 litres = 100%

$$\text{or } \frac{4}{16}$$

oe

$$2 + x = 4 \text{ or } 3x = 12 - 6$$

$$4x - x = 2 + 12 - 8$$

$$4B - B = 12$$

M1dep

(Add) 2 (litres)

A1

[6]

