M1.

Complete, correct build up method
or
0.51 × 400

eg 400 ÷ 2 + 400 ÷ 100 oe

M1

204

A1

[2]

M2.

Alternative method 1

100 – 40 – 28 or 32

M1

their 32 ÷ 100 × 275

oe

0.32 × 275 scores M2

M1dep

88

A1

Alternative method 2

40 ÷ 100 × 275 or 110
or
28 ÷ 100 × 275 or 77

oe

M1

275 – their 110 – their 77

M1dep

88

A1

[3]

M3.

0.1 × 32 or 3.2(0)

oe

M1

32 – their 3.2(0) or 28.8(0)

0.9 × 32 or 28.8(0) scores M2

M1dep

2000 ÷ their 28.8(0) or 69.(44...)

Condone their 28.8 being 32

M1

2000 ÷ 28.5(0) or 70.(17...)
or
28.5 × 70 = 1995

M1

69 and 70 seen and 70 chosen

A1

[5]

M4.

24 + 45 + 281 + 50
or 400

M1

0.18 × their 400
or 72

oe

M1

their 72 – 45 or 27

M1

23

A1

[4]

M5.

Alternative method 1

60 × 40 or 2400

oe

M1

their 2400 − 2000 or 400
or 2000 − their 2400

M1dep

$\frac{\text{their } 400}{2000}$ (× 100) or 0.2

oe

M1dep

20(%)

A1

Alternative method 2

60 × 40 or 2400

oe

M1

their 2400 − 2000 or 400

or 2000 − their 2400

M1dep

10% = 2000 ÷ 10 or 1% = 2000 ÷ 100 **and** correctly finds multiplier using build up or division to find percentage equivalent to total their 400

oe

Correct build up to find percentage equivalent to total their (their 2400 − 2000) or their (2000 − their 2400) implies M3

M1

20(%)

A1

Alternative method 3

60 × 40 or 2400

M1

$\frac{\text{their } 2400}{2000}$ (× 100) or 120(%) or 1.2

M1dep

their 120 − 100 or their 1.2(0) − 1(.00)
or 100 − their 120
or 1(.00) − their 1.2(0) or 0.2

oe

M1dep

20(%)

A1

Additional Guidance
20% on answer line and no working

M1M1M1A1

480 × 5 (= 2400) from 5 years scores minimum M1
60 × 40 = 1800 and 200 scores minimum M1M1
$60 \times 40 = 1800$ and 200 and $\frac{200}{2000}$

M1M1M1A0

$60 \times 40 = 1800$ and $\frac{200}{2000}$

M1M1M1A0

$\frac{2000}{\text{their } 2400}$ $(=1.2)$ does not score second method mark on ALT3

[4]

M6.

$\frac{150}{500}$ $(\times 100)$

oe

M1

30

A1

[2]

M7.

$\frac{30}{100} \times 68$ or 20.4 or 20

or $\frac{70}{100} \times 68$ or 47.6 or 48

oe

M1

0.75 × 55 or 41(.25) or 41.3

oe

M1

15 000 ÷ 47.6 or 315.(…)
or 15 000 ÷ 48
or [312, 316]

oe

Dependent on 1st M1

M1dep

12 000 ÷ 41(.25)
or 12 000 ÷ 41.3
or [290, 293]

oe

Dependent on 2nd M1

M1dep

[312, 316] and [290, 293] and A

Q1

Additional Guidance
68 − 20.4 = 45.6, 15 000 ÷ 45.6 = 329 and 291 seen

M1M1M1M1

Q0

[5]

M8.

$\frac{150}{800}$ (× 100)

or $\frac{150}{650+150}$ (× 100)

or 0.1875

oe

M1

18.75 or 18.8 or 19

oe

SC1 for 81.25 or 81 or 81.3

A1

Additional Guidance

$\frac{800}{150}$

M0

19 with no working
19 is incorrect only if clearly from wrong working
Build up methods score 0 or 2

M1A1

[2]

M9.

49 (%) seen or implied

B1

their 3.22 (× 10^7) ÷ 51 (= 1%)
or *their* 3.22 (× 10^7) ÷ 51 × 2 (= 2%)

or *their* 3.22 $(\times 10^7) \times \frac{66}{360}$

oe

[631 372, 631 373]

1 262 745

5 903 333

M1

their 3.22 (× 10^7) ÷ 51 × 49

or *their* 3.22 $(\times 10^7) - \frac{3.22 \times 2}{51}$

or *their* 3.22 $(\times 10^7) \times \frac{66}{360} \div 51$

oe

[30 937 254, 30 937 255]

[115 751, 115 752]

M1dep

their 3.22 $(\times 10^7) \div 51 \times 49 \times \frac{66}{360}$

or $(\textit{their}\ 3.22 - \frac{3.22 \times 2}{51}) \times \frac{66}{360}$

oe

M1dep

5 671 830 or [5 500 000, 5 700 000]

oe

A1

5.67×10^6 or 6×10^6
or $[5.5 \times 10^6, 5.7 \times 10^6]$

*ft **their** answer which may be rounded and given in standard form*

B1ft

Additional Guidance
$\times 10^7$ not required for method marks
Accept decimals to 2 dp or better

[6]

M10.

Alternative method 1

$\frac{1500}{600}$ or 2.5

or $\frac{600}{1500}$ or 0.4

oe

M1

3.3 × 2.5 or 8.25

9.6 ÷ 2.5 or 3.84

$\frac{15}{100} \times 9.6$ *or 1.44*

or 0.85 seen

M1

$\frac{15}{100} \times 9.6$ or 1.44

or 0.85 seen

$\frac{15}{100} \times 3.84$

or 0.576

or 0.85 seen

9.6 − their 1.44
or 0.85 × 9.6
or 8.16

M1

9.6 − their 1.44 or 8.16

or 0.0064 × 0.85

3.84 − 0.576
or 0.85 × 3.84
their 8.16 ÷ 2.5

M1dep

8.25 and 8.16

3.26 or 3.264 or 3.27

A1

1500 g pack identified

Strand(iii) correct conclusion for their values provided method marks have been awarded

Q1ft

Alternative method 2

3.3 ÷ 600 or 0.0055 (price per 1g)

3.3 ÷ 6 or 0.55 (price per 100g)

M1

9.6 ÷ 1500 or 0.0064

9.6 ÷ 15 or 0.64

$9.6 \times \frac{15}{100}$ *or 1.44*

or 0.85 seen

M1

$\frac{15}{100} \times 0.0064$ or 0.00096

or 0.85 seen

$\frac{15}{100} \times 0.64$ *or 0.096*

or 0.85 seen
9.6 − 1.44
or 0.85 × 1.44
or 8.16

M1dep

their 0.0064 − their 0.00096

or 0.85 × 0.0064

or 0.0054(4)

their 0.64 − their 0.096
or 0.85 × their 0.64
or 0.544
8.16 ÷ 15 or 0.544

M1dep

0.0055 and 0.00544

0.55 and 0.544

A1

1500 g pack identified

Strand(iii) correct conclusion for their values provided method marks have been awarded

Q1ft

Alternative method 3

3.3 ÷ 600 or 0.0055 (price per 1 g)

M1

$\frac{15}{100} \times 9.6$ or 1.44

or 0.85 seen

9.6 ÷ 2.5 or 3.84
$\frac{15}{100} \times 9.6$ *or 1.44*
or 0.85 seen

M1

9.6 − their 1.44

or 0.85 × 9.6

or 8.16

$\frac{15}{100} \times 3.84$
or 0.85 seen
or 0.576
9.6 − their 1.44
or 0.85 × 9.6
or 8.16

M1

their 8.16 ÷ 1500 or 0.00544

3.84 − 0.576
or 0.85 × 3.84
their 8.16 ÷ 2.5

M1dep

0.0055 and 0.00544

3.26 or 3.27

A1

1500 g pack identified

Strand(iii) correct conclusion for their values provided method marks have been awarded

Q1ft

Alternative method 4

600 ÷ 3.3 or 181.8…

3.30 × 5 or 16.50

M1

$\frac{15}{100} \times 9.6$ or 1.44

or 0.85 seen

$\frac{15}{100} \times 9.6$ *or 1.44*

or 0.85 seen

M1

9.6 − their 1.44

or 0.85 × 9.6

or 8.16

9.6 − their 1.44

or 0.85 × 9.6

or 8.16

M1

1500 ÷ their 8.16 or 183.8…

their 8.16 × 2 or 16.32

M1

181.8… and 183.8 …

16.32 and 1650

A1

1500 g pack identified

Strand(iii) correct conclusion for their values provided method marks have been awarded

Q1ft

[6]

M11.

Alternative method 1

300 × 0.19 or 57

oe

300 × 19 or 5700

M1

$\frac{5}{100}\times$ their 57 or 2.85

or 1.05 seen

oe

$\frac{5}{100}\times$ *their 5700 or 285*

or 1.05 seen

M1dep

their 57 + their 2.85

or their 57 × 1.05

their 5700 + their 285

or their 5700 × 1.05 or 5985

M1dep

59.85

A1

Alternative method 2

$\frac{5}{100}\times$ 0.19

or 0.0095

or 1.05 seen

oe

$\frac{5}{100}\times$ *19*

or 0.95

or 1.05 seen

M1

their 0.0095 + 0.19

or 1.05 × 0.19

or 0.1995

oe

their 0.95 + 19

or 1.05 × 19

or 19.95

M1dep

their 0.1995 × 300

their 19.95 × 300 or 5985
or 1.05 × 19 × 3

M1dep

59.85

A1

Alternative method 3

$\frac{5}{100} \times 300$

or 15

or 1.05 seen

oe

M1

their 15 + 300

or 1.05 × 300

or 315

oe

M1dep

their 0.19 × their 315

19 × their 315 or 5985

M1dep

59.85

A1

Additional Guidance

Pick out any correct step, e.g.

300 ÷ 19 × 1.05

M1M1M0A0

300 × 0.5 × 0.19

M1M0M0A0

Beware, 10% of 19 = 1.90, 5% of 19 = 0.95, 1.90 + 0.95 = 2.85 (Alt 2)

M1M0M0A0

If a choice of methods is seen, mark the best

[4]

M12.

(a) 25(%) : 75(%)

or $\frac{1}{4} : \frac{3}{4}$

oe

M1

1 : 3

SC1 3 : 1

A1

(b) 19.5 ÷ 3

or 26 ÷ 4

or 6.5

oe

19.5 ÷ 75 × 25

M1

6.50

Correct money notation

A1

Additional Guidance

Condone 6.50p on answer line provided £ sign is not crossed out

M1A1

[4]

M13.

(a) £50 × 0.92

B1

Alternative method 1

(b) 9 ÷ 0.45 or 20

or 9 ÷ 45 or 0.2

oe

5% = 1 (kg) or 1% = 0.2 (kg) or 10% = 2 (kg)

M1

their 20 − 9

or their 0.2 × 55

oe

55 ÷ 5 or 9 + 2

M1dep

11

A1

Alternative method 2

$\frac{y}{9} = \frac{55}{45}$

oe

e.g. y : 9 = 55 : 45

M1

$9 \times \frac{55}{45}$

oe

M1dep

11

A1

[4]