M1.

800 or 1600 or 200 or 60 or 120 or 100

M1

800 or 1600 and
200 and 60 or
120 or 100

M1

1920 or 1900 or 2000

SC1 1900 without working
or 1900 from 1899

A1

[3]

M2.

32

B1 4 or 16 or 0.5

B2

[2]

M3.(a) 26 ÷ 4 or 6.5

or 26 × 20 × $\frac{1}{4}$ or 130

M1

26 − their 6.5

or 26 ÷ 4 × 3

or (520 − 130) ÷ 20 or 390 ÷ 20

or (520 − their 130) ÷ 20

or their 390 ÷ 20

oe

M1dep

19.5

A1

(b) Any trial with correct factors giving 168 except 1 × 168

or any correctly evaluated product

such that 10 ≤ rows ≤ 13 and

10 ≤ seats ≤ 16

2 (×) 84 or 168 ÷ 2 = 84
3 (×) 56 or 168 ÷ 3 = 56
4 (×) 42 or 168 ÷ 4 = 42
6 (×) 28 or 168 ÷ 6 = 28
7 (×) 24 or 168 ÷ 7 = 24
8 (×) 21 or 168 ÷ 8 = 21
12 (×) 14 or 168 ÷ 12 = 14
oe

M1

A different trial with correct factors giving 168 except 1 × 168

or a different correctly evaluated

product such that 10 ≤ rows ≤ 13 and

10 ≤ seats ≤ 16

M1dep

12 rows

SC2 for 12 seats and 14 rows

14 seats

SC2 for 12 and 14 as final working

A1

[6]

M4.

(a) 2.17158...

B1

(b) 2.2

ft their answer to (a)

B1ft

[2]

M5.(a) Subtracting two amounts with one correct

83 − 57.7

or

83 and 57.7 chosen

57.7 + 25.3 = 83

M1

25.3

Condone 25 300 000

A1

(b) 0.21 × their 126 200

oe

Condone any attempt to incorporate the million

Digits 26 502 imply M1

M1

26 502

Condone 26 502 000 000

SC1 99 698

A1

Additional Guidance

Allow the method for 21% of any value from table (or misread)

Possible answers are 17.43, 14.07, 12.117, 11 256, 11 739

Must be using correct value for full marks

Mark the **whole** method so further working will not score (except for those who misread and work out 21% off − see SC1)

(c) 36 600 000 000 ÷ 29 300 000

or

36 600 (million) ÷ 29.3 (million)

Digits 1249... or 125... imply M1

M1

1249. ...

May be implied by 1250

A1

1250

ft any answer correctly rounded to the nearest 10

B1ft

[7]

M6. 100 seen

M1

20

A1

[2]

M7. 10 or 40 used as an approximation

M1

400 or 410

A1

[2]

M8. Sight of 20, 0.5,10 or 2

M1

$\frac{20 \times 0.5}{2}$

oe $\frac{10}{2}$ *or 10 × 0.5 or 20 × 0.25*

M1

5

A1

[3]

M9. Attempt to count squares
or any area calculation e.g. 4 × 7

Evidence of counting areas e.g. dots or numbers in shaded squares

M1

[22, 27]

A1 for [19, 22) or (27, 30]

A2

[3]

M10.2.2 pounds = 1000 grams seen or implied

May be implied from working
1 ÷ 2.2 (= 0.45 kg) (= 1 pound)

M1

(1 pound =) 1000 ÷ 2.2
(= 454 ... grams)

(1 gram =) 2.2 ÷ 1000 (= 0.0022 pound)

or 1 ÷ 2.2 × 1000

1 ÷ 2.2 × 0.5 (= 0.227 ... grams)

[454, 455] or 450

[0.227, 0.2275] or 0.225 or 0.230

M1

($\frac{1}{2}$ pound =) 1000 ÷ 2.2 ÷ 2

100 grams = 2.2 ÷ 1000 × 100
(= 0.22 pounds)

(= 227.2 ... grams)

or 200 grams = 2.2 ÷ 1000 × 200(= 0.44 pounds)

[227, 227.5] or 225 or 230

or 250 grams = 2.2 ÷ 1000 × 250
(= 0.55 pounds)

or 500 grams = 2.2 ÷ 1000 × 500
(= 1.1 pounds)

M1

[227, 227.5] or 225 or 230 and 250 g stated

0.55 (pounds) and 250 g stated 0.44 (pounds) and 250 g stated SC3 for e.g. 0.227 and 250 g stated

A1

Alternative method

2 pounds = 1000 grams seen or implied

May be implied from working
1 ÷ 2 (= 0.5 kg) (= 1 pound)

M1

(1 pound =) 1000 ÷ 2
(= 500 grams)

(1 gram =) 2 ÷ 1000 (= 0.002 pound)

or 1 ÷ 2 × 1000
(= 500 grams)

1 ÷ 2 × 0.5 (= 0.25 grams)

M1

($\frac{1}{2}$ pound =) 1000 ÷ 2 ÷ 2
(= 250 grams)

100 grams = 2 ÷ 1000 × 100 (= 0.2 pounds)
or 200 grams = 2 ÷ 1000 × 200 (= 0.4 pounds)
or 250 grams = 2 ÷ 1000 × 250 (= 0.5 pounds)
or 500 grams = 2 ÷ 1000 × 500 (= 1 pound)

M1

250 g stated

SC3 for e.g. 0.25 and 250 g stated

A1

[4]

M11. $\frac{40 \times 200}{80}$

M1 for any two shown in the appropriate calculation
M1 for 41 ≈ 40 ***and*** *198 ≈ 200* ***and*** *77 ≈ 80 clearly stated if not used in a calculation*

M1

100

Correct answer only is M1A1 but must use correct approximations if working is seen

A1

[2]

M12.

(a) 1.4

oe

B1

(b) 1.26

B1

[2]

M13.

(a) 28 000

Allow 28 thousand

B1

(b) 28 400

B1

(c) 5.30 + 1 h 45 min (= 7.15)

oe

1 h 45 min + 3 h 30 min (= 5 h 15 min)

or

105 min + 210 min (= 315 min)

M1

their 7.15 + 3 h 30 min

5.30 + their 5 h 15 min

M1

10.45

oe

A1

Correct decision for their 10.45

Strand (iii) Must score at least M1

SC1 10.05

Q1ft

Alternative 1

10.00 − 3 h 30 min (= 6.30)

oe

1 h 45 min + 3 h 30 min (= 5 h 15 min)

or

105 min + 210 min (= 315 min)

M1

Their 6.30 − 1 h 45 min

10.00 − their 5 h 15 min

M1

4.45

oe

A1

Correct decision for their 4.45

Strand (iii) Must score at least M1

SC1 10.05

Q1ft

Alternative 2
5.30 + 3 h 30 min (= 9.00)

M1

their 9.00 + 1 h 45 min
10.00 − their 9.00

M1

10.45
1 hour (and 1 h 45 min)

A1

Correct decision for
their 10.45 **or**
their 1 hour (and 1 h 45 min)
Strand (iii) Must score at least M1
SC1 10.05

Q1ft

Alternative 3
10.00 − 5.30 (= 4 h 30 min)

M1

1 h 45 min + 3 h 30 min

M1

5h 15 min **and** 4 h 30 min

A1

Correct decision for their 5h 15 min and their 4 h 30 min
Strand (iii) Must score at least M1
SC1 10.05

Q1ft

Use of incorrect decimal times (1.45 and 3.3). Eg,
5.3 + 1.45 + 3.3 scores M0M0A0Q0
5.3 + 1.45 + 3.3 = 10.05 scores SC1
5.3 + 1.45 → 6.75 + 3.5 = 10.25 scores M0M1A0Q0
Use of correct decimal times *(1.75 and 3.5). Eg,*
5.5 + 1.75 + 3.5 = 10.75 and No scores M1M1A0Q1
5.5 + 1.75 + 3.5 = 10.75 → 10.45 scores M1M1A1Q0

[6]

M14.(a) 300 or 600 or 50 or 100 or 20

M1

300 or 600

and

50 or 100

and

20

M1

720

SC2 480 SC2 860 SC2 719 SC1 any table value rounded to 1sf SC1 715 SC1 720 without M1 awarded

A1

(b) (349 + 349 + 59 + 59 + 39 or 855) − (299 + 299 + 49 + 49 + 19 **or** 715 **or** their incorrect total of exact values for July in part(a))

M1

140

ft 855 − their incorrect total of exact values in part(a)

A1ft

Alternative Method 2 × 50 + 2 ×

10 + 20 or 350 + 350 + 60 + 60 + 40

− their 720

M1

140

ft 860 − their 720 from rounding in part(a)

A1ft

[5]

M15. 30 or 5

Allow 30.0 or 5.0

M1

150

Allow [145,156], but not 153.92 rounded.

A1

[2]

M16. Any two numbers approximated

ie 400, 402, 403, 2, 39 or 40

M1

All three numbers approximated or a calculation using two approximated values

eg $\frac{402.5}{78}$

M1

5

must come from $\frac{400}{2\times 40}$

A1

[3]