

M1.

370

B1

[1]**M2.** $\frac{2}{3}$ or $\frac{40}{60}$ or $0.\dot{6}$ *Allow 0.67 or 0.66 or better*

B1

135

B1

[2]**M3.**720 \div 30
or 0.72 \div 0.03
or 24

M1

their 24 \times 2

M1dep

48 and No

A1

[3]

M4.

$345 - 96$ or 249

M1

$80 \div 10 \times 3$ or 24

oe

M1

their 249 \div their 24

or

their 24 \times 10 or their 24 \times 11

Condone 345 \div 24

M1

11

A1**[4]****M5.****Alternative method 1**

5×24.2 or 121 (miles)

M1

their 121 \div 32.3

or

[3.74, 3.75] (gallons)

M1

their [3.74, 3.75] \times 4.5

or

[16.8, 16.9] (litres)

M1

their $[16.8, 16.9] \times 1.27$

M1

$[21.33, 21.47]$ and bus

Accept 21 and bus if working shown

A1

Alternative method 2

5×24.2 or 121 (miles)

M1

their $121 \div 32.3$

or

$[3.74, 3.75]$ (gallons)

M1

1.27×4.5

or 5.71(5) or 5.72

M1

their $[3.74, 3.75] \times$ their 5.71(5)

M1

$[21.33, 21.47]$ and bus

Accept 21 and bus if working shown

A1

Alternative method 3

$19.50 \div 5$ or 3.9(0)

M1

$24.2 \div 32.3$

or

$[0.74, 0.75]$ (gallons)

M1

their $[0.74, 0.75] \times 4.5$
or
 $[3.3, 3.4]$ (litres)

M1

their $[3.3, 3.4] \times 1.27$

M1

$[4.19, 4.32]$ and $3.9(0)$ and bus

Accept 4 and 3.9(0) and bus if working shown

A1

Alternative method 4

$19.50 \div 5$ or $3.9(0)$

M1

$24.2 \div 32.3$
or
 $[0.74, 0.75]$ (gallons)

M1

1.27×4.5
or $5.71(5)$ or 5.72

£ per gallon

M1

their $[0.74, 0.75] \times$ their $5.71(5)$

M1

$[4.19, 4.32]$ and $3.9(0)$ and bus

Accept 4 and 3.9(0) and bus if working shown

A1

[5]

M6.(a) 46

B1

(b) 1.5 seen or implied

or 14 seen

oe

B1

28 × 1.5

or 28 + 14

*Attempt to multiply speed by time**eg 28 × 1.3 or 36.4**or 90 × 28 or 2520**or 130 × 28 or 3640*

M1

42

A1

[4]

M7.(a) 400 ÷ 2 or 400 – 200 or 200

or 400 ÷ 4 or 400 – 200 – 100

or 400 – 300 or 100

or 400 ÷ 8

or 400 – 200 – 100 – 50

or 400 – 350

oe

*One correct step**Working may be on diagram*

M1

50

A1

Additional Guidance

$$400 - 100 - 100 - 100 = 100$$

is M0 A0

100 as final answer with no working shown

is M0 A0

(b) $400 \times 2 \times 2$ or 400×4 or 800×2

or 400×4

or 1600

or 0.4

oe

M1

1.6

SC1 for a correct conversion for their 1600

A1

Additional Guidance

$$1200 \text{ ml} = 1.2 \text{ l}$$

is SC1

$$1000 \text{ ml} = 1 \text{ l with 1 on answer line}$$

is M1 A0

$$1 \text{ l} = 1000 \text{ ml alone}$$

is M0 A0

[4]

M8.(a) $75 \div 3$

$75 \div 60 \times 20$ or 1.25 km per minute

M1

25

A1

- (b) Any correct conversion between miles and km seen, eg 5 miles = 8 km
or 1 mile = 1.6 km or 1km = $\frac{5}{8}$ mile

$$75 \times \frac{5}{8}$$

M1

Slower as limit is 80 km

$$\text{Slower as } 46.875 < 50$$

A1

[4]

M9.(a) 70 x 737

or digits 5159 seen

$$70 \times \text{their } 737$$

M1

51 590 or 51 600 or 52 000

$$\text{ft their } 737$$

A1ft

51.59(0) or 51.6 or 52

$$\text{ft their } 51590 \div 1000$$

A1ft

- (b) 70 ÷ 30 (x 60)

or 70 ÷ 0.5

0.5 litres per second

60 litres in 2 minutes

10 litres in 1 / 3 minute

M1

$$\frac{7}{3} \text{ or } 2\frac{1}{3}$$

or 2.33(...)

or 140 (seconds)

e.g.

60 litres in 2 minutes and 10 litres in 1 / 3 minute

A1

2 minutes 20 seconds

A1

[6]

M10. $80 + 45 + 70$

$200 - (80 + 45 + 70)$

$0.8 + 0.45 + 0.7$

$2 - (0.8 + 0.45 + 0.7)$

M1

195

5

Yes and 195 (< 200)

1.95

0.05

Yes and 1.95 (< 2)

A1

*Yes and 5 (left over) or Yes and 0.05**Strand (iii)**M1 awarded and correct decision for their total**SC1 for any correct conversion**eg 2 metres = 200 cm**or 80 cm = 0.8 metres**or 45 cm = 0.45 metres*

or 70 cm = 0.7 metres

Q1 ft
[3]

M11.2.2 pounds = 1000 grams seen or implied

May be implied from working

$1 \div 2.2$ (= 0.45 kg) (= 1 pound)

M1

(1 pound =) $1000 \div 2.2$
(= 454 ... grams)

(1 gram =) $2.2 \div 1000$ (= 0.0022 pound)

or $1 \div 2.2 \times 1000$

$1 \div 2.2 \times 0.5$ (= 0.227 ... grams)

[454, 455] or 450

[0.227, 0.2275] or 0.225 or 0.230

M1

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

100 grams = $2.2 \div 1000 \times 100$
(= 0.22 pounds)

(= 227.2 ... grams)

or 200 grams = $2.2 \div 1000 \times 200$ (= 0.44 pounds)

[227, 227.5] or 225 or 230

or 250 grams = $2.2 \div 1000 \times 250$
(= 0.55 pounds)

or 500 grams = $2.2 \div 1000 \times 500$
(= 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

$$1 \div 2 (= 0.5 \text{ kg}) (= 1 \text{ pound})$$

M1

(1 pound =) $1000 \div 2$
(= 500 grams)

$$(1 \text{ gram} =) 2 \div 1000 (= 0.002 \text{ pound})$$

or $1 \div 2 \times 1000$
(= 500 grams)

$$1 \div 2 \times 0.5 (= 0.25 \text{ grams})$$

M1

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

$$100 \text{ grams} = 2 \div 1000 \times 100 (= 0.2 \text{ pounds})$$

$$\text{or } 200 \text{ grams} = 2 \div 1000 \times 200 (= 0.4 \text{ pounds})$$

$$\text{or } 250 \text{ grams} = 2 \div 1000 \times 250 (= 0.5 \text{ pounds})$$

$$\text{or } 500 \text{ grams} = 2 \div 1000 \times 500 (= 1 \text{ pound})$$

M1

250 g stated

SC3 for e.g. 0.25 and 250 g stated

A1

[4]

M12.8 $\times 500\,000$ or $4\,000\,000$

1 km = 1000 m and 1 m = 100 cm seen

or 1 km = 100 000 cm seen or implied

M1

$8 \times 500\,000 \div 100$ oe

$$\text{or } 8 \times 500\,000 \div 1000$$

$$\text{or } 8 \times 500\,000 \div 100\,000$$

M1dep

40

A1

Alternative method

$$\text{or } 500\,000 \div 1000 \text{ or } 500$$

*1 km = 1000 m **and** 1 m = 100 cm seen*

$$\text{or } 500\,000 \div 100 \text{ or } 5000$$

or 1 km = 100 000 cm seen or implied

$$\text{or } 8 \div 100 \text{ or } 0.08$$

$$\text{or } 8 \div 1000 \text{ or } 0.008$$

M1

$$\text{or } 500\,000 \div 100\,000 \text{ or } 5$$

$$\text{or } 500\,000 \div 1000 \times 8 \text{ or } 4000$$

$$\text{or } 500\,000 \div 100 \times 8 \text{ or } 40\,000$$

$$\text{or } 500\,000 \div 100 \div 1000$$

$$\text{or } 8 \div 100\,000 \text{ or } 0.000\,08$$

M1dep

40

A1

[3]

$$\mathbf{M13.(a)} \quad \frac{1}{2} \times (280 + 198) \times 86 \text{ oe}$$

$$\text{or } 198 \times 86 + \frac{1}{2} \times (280 - 198) \times 86$$

$$\text{or } 280 \times 86 - \frac{1}{2} \times (280 - 198) \times 86$$

M1

20554

A1

- (b) their $20\,554 \div 4047$ or 5.08 or
5.07... or 5.1

$$4047 \div 7 = 578.(14\dots)$$

M1

their 5.08×7

$$\text{their } 20\,554 \div \text{their } 578.(14\dots)$$

M1dep

35.5... or 35.56 or 35.7

A1

35

Rounding down

Q1ft

[6]

- M14.(a)** Valid explanation

*eg Should be 6.2**Goes up in (point) twos 6.2 seen on scale*

B1

- (b) 1000 grams = 1 kg

Seen or implied

or 1.2×1000 or 1200 seen

or $1.2 \div 6$ or 0.2 seen

B1

$1.2 \times 1000 \div 6$

or $1200 \div 6$

or 0.2×1000

or $1.2 \times \text{their } 1000 \div 6$

or $0.2 \times \text{their } 1000$

M1

200

A1 ft

[4]