

M1.**Alternative method 1**

$$24 \times 48 \times 9.2 \text{ or } 10598.4(0)$$

M1

10598.4(0) and Yes

A1

Alternative method 2

$$10\,000 \div 24 \div 48 \text{ or } 8.6(8\dots) \text{ or } 8.7$$

M1

8.6(8...) or 8.7 and Yes

A1

Alternative method 3

$$10\,000 \div 24 \div 9.2 \text{ or } 45.(...) \text{ or } 46$$

M1

45.(...) or 46 and Yes

A1

Alternative method 4

$$10\,000 \div 48 \div 9.2 \text{ or } 22.(...) \text{ or } 23$$

M1

22.(...) or 23 and Yes

A1

M2.

$$0.1 \times 32 \text{ or } 3.2(0)$$

oe

M1

$$32 - \text{their } 3.2(0) \text{ or } 28.8(0)$$

0.9 × 32 or 28.8(0) scores M2

M1dep

$$2000 \div \text{their } 28.8(0) \text{ or } 69.(44\dots)$$

Condone their 28.8 being 32

M1

$$2000 \div 28.5(0) \text{ or } 70.(17\dots)$$

or

$$28.5 \times 70 = 1995$$

M1

69 and 70 seen and 70 chosen

A1

[5]

M3.

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

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

oe

M1

$$0.75 \times 55 \text{ or } 41(.25) \text{ or } 41.3$$

oe

M1

$$15\,000 \div 47.6 \text{ or } 315.(...)$$

$$\text{or } 15\,000 \div 48$$

$$\text{or } [312, 316]$$

oe

Dependent on 1st M1

M1dep

$$12\,000 \div 41(.25)$$

$$\text{or } 12\,000 \div 41.3$$

or [290, 293]

oe

Dependent on 2nd M1

M1dep

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

Q1

Additional Guidance

$68 - 20.4 = 45.6$, $15\ 000 \div 45.6 = 329$ and 291 seen

M1M1M1M1

Q0

[5]

M4.

Alternative method 1

$2 \times \pi \times 40$

or [251.2, 251.5]

or 251

or 250

M1

$(2 \times \pi \times 40 + 200)$

or [251.2, 251.5] + 200

or 251 + 200

or 250 + 200

M1dep

Distance \div 18 or Distance \div 30

M1

25.(...) and yes

or 15.(...) and yes

*Strand (iii) decision to match their answers
ft provided M1M0M1*

Q1ft

Alternative method 2

$2 \times \pi \times 40$

or [251.2, 251.5]

or 251

or 250

M1

$(2 \times \pi \times 40 + 200)$

or [251.2, 251.5] + 200

or 251 + 200

or 250 + 200

M1dep

18 × 30 or 540

M1

[450, 451.5] and 540 and yes

*Strand (iii) decision to match their answers
ft provided M1MOM1*

Q1ft

Additional Guidance

$100 + 100 + 40 + 40 = 280, 280 \div 18 = 15.(\dots)$

M0M0M1Q0

$\pi \times 80 = 251.3, 251.3 \div 2 = 125.65$

M0

Distance means any number using addition of lengths given in the question

e.g. (100 + 40), 250, 200, 100

[4]

M5.(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]

M6.(a) their 9×0.6

or their $9 \div 0.5$

or $0.6 \div 0.5 (= 1.2)$

oe

M1

$$\frac{\text{their } 9 \times 0.6}{0.5}$$

oe

M1dep

10.8

A1

(b) 13.6×3600

or $13.6 \div 1000$

or $3600 \div 1000$

oe
 50×1000
 or $50 \div 3600$
 or $1000 \div 3600$

M1

$$\frac{13.6 \times 3600}{1000}$$

$$\frac{50 \times 1000}{3600}$$

M1

48(...) or 49
 13.8(...) or 13.9

A1

Alternative Method

13.6×3600
 $13.6 \div 1000$

M1

50×1000
 $50 \div 3600$

M1

48 960 or 49 000 and 50 000
 0.0136 and $0.0138(\dots)$ or 0.0139

A1

[6]

M7. $169 \div 65$

65×2.5 or $65 \times \text{their } 2.5$ or $169 \div 2.5$

M1

2.6 or 2 hours 36 (minutes)

162.5 or 6.5 miles to go or 67.6 (mph)

A1

2h 30 or 2.5 h or 150 (minutes)

or

9.06 or 9.1 (not 9.10)

or

6.24 or 6.4

2.5h

B1

No

A1

[4]