

1 A car journey is in two stages.

Stage 1 The car travels 110 miles in 2 hours.

Stage 2 The car travels 44 miles at the same average speed as Stage 1

Work out the time for Stage 2

Give your answer in minutes.

[3 marks]

$$\text{speed}_1 : \frac{110}{2} = 55 \quad (1)$$

$$\text{time}_2 : \frac{44}{55} = 0.8 \text{ hours} \quad (1)$$

$$0.8 \times 60 = 48 \text{ min} \quad (1)$$

Answer 48 minutes

2 Charlie is driving 293 miles home.

He

- leaves at 9.00 am
- travels the first 176 miles at an average speed of 48 mph
- drives the rest of the way at an average speed of 65 mph

Will he be home by 2.30 pm?

You **must** show your working.

[4 marks]

$$\text{first : } \frac{176}{48} = 3 \frac{2}{3} \text{ hours} = 3 \text{ hours } 40 \text{ minutes} \quad (1)$$

$$\begin{aligned} \text{the rest : } \frac{293-176}{65} &= \frac{117}{65} = 1.8 \text{ hours} \\ &= 1 \text{ hour } 48 \text{ minutes} \quad (1) \end{aligned}$$

$$\begin{aligned} &9 \text{ am} + 3 \text{ hour } 40 \text{ mins} + 1 \text{ hour } 48 \text{ mins} \\ &= 2.28 \text{ pm} \quad (1) \end{aligned}$$

Yes. He arrives at 2.28 pm