

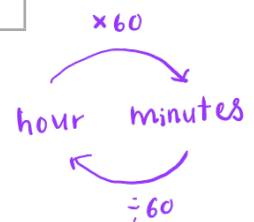
1 Lucas is going on a country walk.

Lucas works out how long each part of his walk will take.
This information is shown in the following table.

	Time taken
Walk from home to Village A	20 minutes
Walk from Village A to Village B	35 minutes
Stop for lunch in Village B	1 hour 15 minutes
Walk from Village B to home	30 minutes

Lucas leaves home at 11 10

At what time will Lucas get home?



Add all the times he took :

$$= 20 \text{ minutes} + 35 \text{ minutes} + (1 \text{ hour} \times 60) + 15 \text{ minutes} + 30 \text{ minutes} \quad \text{Convert to minutes} \quad \textcircled{1}$$

$$= (20 + 35 + 60 + 15 + 30) \text{ minutes}$$

$$= 160 \text{ minutes} \times \frac{1 \text{ hour}}{60 \text{ minutes}} = 2 \text{ hour } \frac{2}{3} (60) \text{ minutes} \quad \text{Convert to hours}$$

$$= 2 \text{ hour } 40 \text{ minutes} \quad \textcircled{1}$$

Lucas arrives home at :

$$11 \text{ 10} + 2 \text{ hour } 40 \text{ minutes}$$

$$= 13:50 \text{ or } 1.50 \text{ pm} \quad \textcircled{1}$$

1.50 pm

(Total for Question 1 is 3 marks)

- 2 Diego left home on Tuesday at 07 50
He arrived home on the same Tuesday at 17 35

Work out the length of time that Diego was away from home on Tuesday.
Give your answer in hours and minutes.

$$0750 \rightarrow 1750 = 10 \text{ hours}$$

$$1750 - 1735 = 15 \text{ minutes}$$

Diego was away for :

$$10 \text{ hours} - 15 \text{ minutes}$$

$$= 9 \text{ hours } 45 \text{ minutes } \textcircled{2}$$



..... 9 hours 45 minutes

(Total for Question 2 is 2 marks)

Ivan goes to the gym at 7 15 pm.

3(e) Write this time using the 24-hour clock.

19 15 ①

(1)

(Total for Question 3 is 1 marks)

- 4 Buses leave a bus station to go to the hospital every 16 minutes.
Buses leave the same bus station to go to the college every 20 minutes.

At 9 am a bus leaves the bus station to go to the hospital and at the same time a bus leaves the bus station to go to the college.

Work out the next time that a bus leaves the bus station to go to the hospital and at the same time a bus leaves the bus station to go to the college.

Hospital : 9.00 , 9.16 , 9.32 , 9.48 , 10.04 , 10.20 ①

College : 9.00 , 9.20 , 9.40 , 10.00 , 10.20 ①

∴ The bus next leave at the same time at 10.20 am. ①

10 20

(Total for Question 4 is 3 marks)

5 Here are five times, in a single day, using the 24-hour clock.

A	B	C	D	E
11 53	15 20	08 20	18 12	16 45
11.53 am	3.20 pm	8.20 am	6.12 pm	4.45 pm

(a) Write down the letter of the time nearest to 6 pm

D (1)

(b) Work out the difference, in hours and minutes, between time A and time E.

$$\begin{array}{r} 15 \text{ } 105 \\ \times 6 \text{ } 45 \\ \hline 11 \text{ } 53 \\ \hline 4 \text{ } 52 \end{array} = 4 \text{ hours } 52 \text{ minutes}$$

1 hour = 60 minutes

4 hours 52 minutes (2)

Francesco uses the rule below to find the time, in minutes, to cook a chicken in his oven.

Number of minutes to cook a chicken
Multiply the weight of the chicken, in kg, by 40 and then add 15

The clock on Francesco's oven shows time B.

Francesco starts cooking a chicken at this time.

He stops cooking the chicken when the clock on his oven shows time E.

(c) Work out the weight of the chicken.

$$\begin{aligned} E - B &: 16 \text{ } 45 - 15 \text{ } 20 \\ &= 1 \text{ hour } 25 \text{ minutes} \\ &= 85 \text{ minutes (1)} \end{aligned}$$

$$85 \text{ minutes} = (\text{weight} \times 40) + 15$$

$$\text{weight} = \frac{85 - 15}{40} = 1.75 \text{ kg (1)}$$

1.75 kg (3)

(d) Use Francesco's rule to write down a formula for the time, T minutes, to cook a chicken of weight k kilograms.

$$T = 40k + 15$$

$T = 40k + 15$ (2)

(Total for Question 5 is 8 marks)

6 Akiko travelled from London to Tokyo by plane.

The plane left London at 18 40 on Friday.

The plane arrived in Tokyo the next day, at 06 25 London time.

How long did the flight take?

Give your answer in hours and minutes.

$$\begin{array}{r}
 \text{hrs} \quad \text{mins} \\
 23 \quad | \quad 60 \\
 - \quad 18 \quad | \quad 40 \\
 \hline
 5 \quad | \quad 20
 \end{array}$$

$$1 \text{ hour} = 60 \text{ minutes}$$

$$\underbrace{5 \text{ hours } 20 \text{ minutes}} + \underbrace{6 \text{ hours } 25 \text{ minutes}} = 11 \text{ hours } 45 \text{ minutes } \textcircled{2}$$

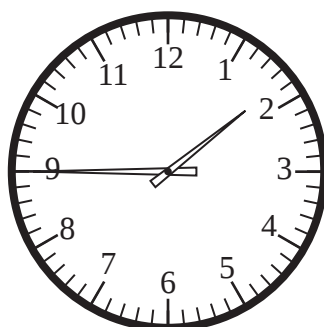
duration from
departure till
midnight

From midnight till
6 : 25 am the following
day

..... 11 hours 45 minutes

(Total for Question 6 is 2 marks)

7 Here is a clock face.



(c) Write down the time shown on the clock face.

1.45 ①

(1)

(Total for Question 7 is 1 marks)

- 8 (a) Write the time 8 30 pm using the 24-hour clock.

20 30 (1)
.....
(1)

Ella started watching television at 10 50 am.

Ella watched

- a comedy programme lasting 45 minutes
- a sports programme lasting 1 hour 10 minutes
- a history programme

There were no breaks and no advertisements between the programmes.
Ella finished watching television at 2 20 pm.

- (b) How long did the history programme last?
Give your answer in minutes.

$$10:50 \text{ am} + 45 \text{ mins} = 11:35 \text{ am} \quad (1)$$

$$11:35 \text{ am} + 1 \text{ hr } 10 \text{ mins} = 12:45 \text{ pm} \quad (1)$$

$$12:45 \text{ pm to } 2:20 \text{ pm} = 1 \text{ hr } 35 \text{ minutes}$$

$$\approx 95 \text{ mins} \quad (1)$$

95
..... minutes
(3)

(Total for Question 8 is 4 marks)

- 9 (a) Write 5 15pm using the 24-hour clock.

17 15 (1)

(1)

Roberta goes out for a walk.

She leaves home at 16 35

She arrives back home at 20 15 on the same day.

- (b) Work out for how much time Roberta is out for her walk.

16 35 to 19 35 = 3 hours

19 35 to 20 15 = 40 minutes

(1)

(1)

3 hours 40 minutes
(2)

(Total for Question 9 is 3 marks)