Time and Timetables

GCSE Mathematics • **Foundation Tier** • Grades 1–2 • Non-calculator

WORKED SOLUTIONS

Name: worked example Class: _____ Total: 47 / 47

Show all your working. Marks are given for correct method as well as the final answer.

1. Write down the time shown on this clock. **[1 mark]**



hour hand between 3 and 4 → 3 o'clock hour
minute hand on 8 → 40 minutes

Answer: 3:40 (twenty to four)

2. Write down the time shown on this clock. **[1 mark]**



minute hand on 3 = 15 minutes

Answer: 7:15 (quarter past seven)

3. Write down the time shown on this clock. **[2 marks]**



hour hand ALMOST at 12, so it is still 11
nearly 12 does not mean 12
minute hand on 10 = 50 minutes

Answer: 11:50 (ten to twelve)

4. Write 4:35 pm using the 24-hour clock. **[1 mark]**

pm → add 12 to the hour
4 + 12 = 16

Answer: 16:35

5. Write 09:20 using am or pm. **[1 mark]**

before 12:00 so it is am

Answer: 9:20 am

6. Write 00:45 using am or pm. **[2 marks]**

00 hours is midnight
00:45 is 12:45 am, NOT 12:45 pm

Answer: 12:45 am

7. Write 23:05 using am or pm. **[1 mark]**

23 − 12 = 11

Answer: 11:05 pm

8. A film starts at 18:40 and lasts 95 minutes. Work out when it finishes. **[3 marks]**

95 min = 1 h 35 min
18:40 + 1 h = 19:40
19:40 + 20 min = 20:00
+ 15 more = 20:15

Answer: 20:15

9. A journey starts at 09:50 and ends at 11:25. Work out how long it took. **[3 marks]**

09:50 to 10:00 is 10 min
10:00 to 11:00 is 1 hour
11:00 to 11:25 is 25 min
10 + 25 = 35, so 1 h 35 min

Answer: 1 h 35 min

10. A shift runs from 22:30 to 06:15 the next day. Work out its length. **[3 marks]**

22:30 to midnight is 1 h 30 min
midnight to 06:15 is 6 h 15 min
1 h 30 + 6 h 15 = 7 h 45 min

Answer: 7 h 45 min

11. Change 2.5 hours into hours and minutes. **[2 marks]**

0.5 of 60 = 30
NOT 2 h 50 min -- the decimal is a fraction of an hour

Answer: 2 h 30 min

12. Change 1.75 hours into minutes. **[2 marks]**

1.75 × 60
= 105

Answer: 105 minutes

13. Change 200 minutes into hours and minutes. **[2 marks]**

200 ÷ 60 = 3 remainder 20

Answer: 3 h 20 min

14. A bus leaves Hampstead at 08:12 and the journey takes 38 minutes. Work out its arrival time. **[2 marks]**

08:12 + 38 min
12 + 38 = 50
= 08:50

Answer: 08:50

15. Trains leave every 25 minutes from 07:05. Write down the first four departure times. **[2 marks]**

+25 each time
07:55 + 25 = 08:20, not 07:80
60 minutes make an hour, not 100

Answer: 07:05, 07:30, 07:55, 08:20

16. A train leaves at 14:48 and arrives at 16:05.

(a) Work out the journey time. **[3 marks]**

14:48 to 15:00 is 12 min
15:00 to 16:00 is 1 hour
16:00 to 16:05 is 5 min
12 + 5 = 17, so 1 h 17 min

(b) The next train is 12 minutes slower. Work out its journey time. **[2 marks]**

1 h 17 min + 12 min
= 1 h 29 min

Answer: 1 h 17 min ; 1 h 29 min

17. A recipe needs 1 h 25 min in the oven. It must be ready at 19:00. Work out when it goes in. **[3 marks]**

count BACK from 19:00
19:00 − 1 h = 18:00
18:00 − 25 min = 17:35

Answer: 17:35

18. Work out how many minutes there are in 3 days. **[2 marks]**

24 × 60 = 1440 min in a day
1440 × 3 = 4320

Answer: 4320

19. A clock shows the time below.



(a) Write down the time shown. **[1 mark]**

minute hand on 5 = 25 minutes
9:25

(b) Write down the time 50 minutes later, using the 24-hour clock (it is morning). **[3 marks]**

9:25 + 35 min = 10:00
+ 15 more = 10:15
morning, so 10:15

Answer: 9:25 ; 10:15

20. Three friends run a relay. Their times are 4 min 38 s, 5 min 12 s and 4 min 55 s.

(a) Work out the total time. **[3 marks]**

seconds: 38 + 12 + 55 = 105 s
105 s = 1 min 45 s
minutes: 4 + 5 + 4 = 13, + 1 = 14
= 14 min 45 s

(b) Work out the difference between the fastest and slowest. **[2 marks]**

fastest 4:38, slowest 5:12
4:38 to 5:00 is 22 s, + 12 = 34 s

Answer: 14 min 45 s ; 34 s

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