



Unit 13: Time

Lesson 1: Units of time (I)

→ pages 58–60

1. a) $1 \text{ minute } 45 \text{ seconds}$

1 minute		45 seconds	
60 seconds	45 seconds		

$60 \text{ seconds} + 45 \text{ seconds} = 105 \text{ seconds}$

b) $3 \text{ hours } 12 \text{ minutes}$

1 hour	1 hour	1 hour	12 mins
60 minute	60 minute	60 minute	12 mins

$3 \times 60 \text{ minutes} = 180 \text{ minutes}$

$180 \text{ minutes} + 12 \text{ minutes} = 192 \text{ minutes}$

c) 157 seconds

1 minute	1 minute	37 secs
60 seconds	60 seconds	37 secs

$2 \text{ minutes } 37 \text{ seconds}$

2. $1 \times 6 = 6$ $1 \times 60 = 60$ $1 \text{ hour} = 60 \text{ minutes}$
 $2 \times 6 = 12$ $2 \times 60 = 120$ $2 \text{ hours} = 120 \text{ minutes}$
 $3 \times 6 = 18$ $3 \times 60 = 180$ $3 \text{ hours} = 180 \text{ minutes}$
 $4 \times 6 = 24$ $4 \times 60 = 240$ $4 \text{ hours} = 240 \text{ minutes}$
 $10 \times 6 = 60$ $10 \times 60 = 600$ $10 \text{ hours} = 600 \text{ minutes}$
3. a) Completed in Practice Book
 b) 1 hour and 35 minutes
 c) 2 hours and 25 minutes
4. Ella's dad finished the marathon 130 minutes after the winner.
5. 3,600 drops will be in the bowl after 1 hour (60×60).

Reflect

Different methods are possible; for example:
 There are 60 minutes in 1 hour.
 $152 - 60 = 92$
 $92 - 60 = 32$
 So, there are 2 hours and 32 minutes in 152 minutes.

Lesson 2: Units of time (2)

→ pages 61–63

1. a) 21 days

7 days	7 days	7 days
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$21 \div 7 \text{ days} = 3 \text{ weeks}$

The orange juice should be used within 3 weeks.

b) $3 \text{ weeks and } 5 \text{ days}$

1 week	1 week	1 week	5 days
7 days	7 days	7 days	5 days

$3 \times 7 \text{ days} + 5 \text{ days} = 26 \text{ days}$

The parcel should be delivered in 26 days.

c) 36 months

12 months	12 months	12 months
1 year	1 year	1 year

3 years

The toy is suitable for children over 3 years old.

2. Lines drawn to match
 $4 \text{ years} \rightarrow 48 \text{ months}$
 $12 \text{ weeks} \rightarrow 84 \text{ days}$
 $2 \text{ years} \rightarrow 730 \text{ days}$
 $6 \text{ weeks } 6 \text{ days} \rightarrow 48 \text{ days}$
 $7 \text{ months} \rightarrow \text{about } 30 \text{ weeks}$
3. Lee has calculated $53 \times 7 = 371$. This would tell you the number of days in 53 weeks.
 To find the number of weeks in 53 days, Lee should have calculated $53 \div 7$ to get the answer 7 weeks and 4 days.
4. a) $5 \text{ weeks} + 13 \text{ days} = 6 \text{ weeks } 6 \text{ days}$
 b) $38 \text{ months} - 2 \text{ years} = 14 \text{ months}$
5. Explanations completed:
 months in a number of years, multiply by 12.
 years in a number of months, divide by 12.
 days in a number of weeks, multiply by 7.
 weeks in a number of days, divide by 7.
6. Answers will vary; for example:
 $9 \text{ years, } 11 \text{ weeks and } 4 \text{ days}$
 $9 \times 365 + 2 \text{ extra days in leap years} = 3,287$
 $11 \times 7 = 77$
 $3,287 + 77 + 4 = 3,368$
 I am 3,368 days old.

Reflect

Explanations may vary; for example:
 I can find the answer by dividing 20 by 12 and writing the remainder as months.
 $20 \div 12 = 1 \text{ r } 8$, so 20 months is 1 year and 8 months.



Lesson 3: Converting times (1)

→ pages 64–66

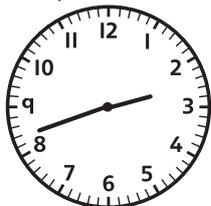
1. a) 1:31 am



c) 3:53 pm



b) 2:42 pm



d) 4:04 am



2. The correct digital time is 10:58.
 Emma has mistakenly read the number each hand is closest to.
 Max has correctly read the minutes as 58 but incorrectly read the hours as 11 because the hour hand is almost at 11.

3. a)



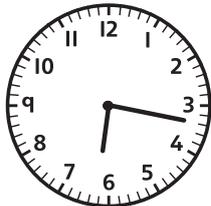
2:12 am

b)



12:45 pm

c)

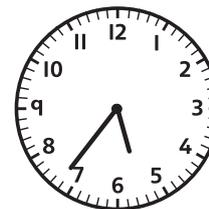
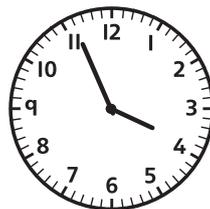


6:17 pm

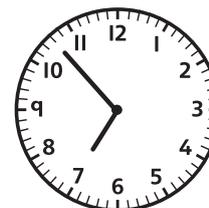
4. In the digital time, the 9 represents 9 hours because quarter to 10 is the same as 9:45.
 In the analogue time, the minute hand pointing to the 9 represents 45 minutes past the hour, or a quarter to the next hour.

5. Order of answers will vary:

3:56 pm 5:36 pm



6:35 pm 6:53 pm



Reflect

Explanations will vary; for example:

To convert from analogue into digital, I would look at the hour (short) hand to identify the hour it is pointing at or has just gone past. I would write this hour before the colon. Then I would look at the minute (long) hand and work out how many minutes it is after the hour by counting how many small intervals the minute hand has turned through (clockwise) since passing the 12. I would write this after the colon (using two digits; for example: writing 02 for 2 minutes). If the time is the morning, I would write 'am' after the time and if it is the afternoon I would write 'pm'.

Lesson 4: Converting times (2)

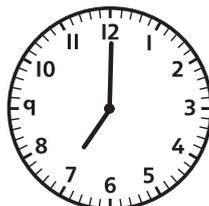
→ pages 67–69

1. a)

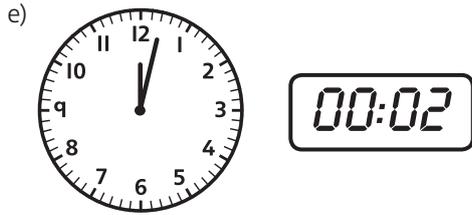
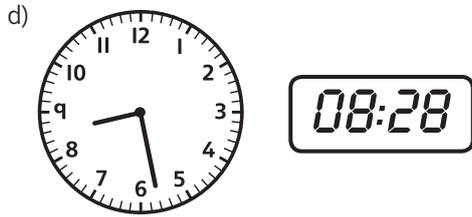
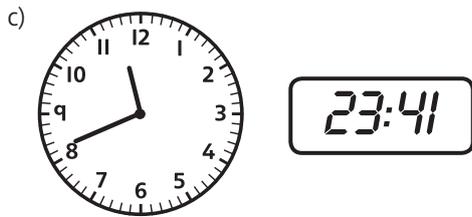


01:05

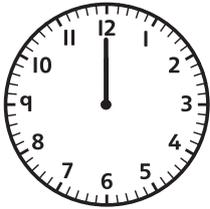
b)



19:00



2. a) 00:00



c) 20:16



b) 13:42



d) 09:51



3. a) 03:42

24-hour time is written using 4 digits so you need to put a zero before the 3.

b) 15:42

No need for the pm after a 24-hour time.

4. Max's watch will show 15:47.

5. Many answers are possible; for example:

05:12	5:12 am
10:07	10:07 am
13:04	1:04 pm
14:30	2:30 pm

Reflect

Explanations will vary. Children should recognise that 24-hour times have 4 digits and 12-hour times need to specify whether they are 'am' or 'pm'; for example:

To convert a 12-hour am time to 24-hour:

If the hour is 12, replace with 00; if the hour is 1 to 9, write a 0 in front; if the hour is 10 or 11, leave as is.

To convert a 12-hour pm time to 24-hour:
If the hour is 12, leave as is; if the hour is 1 to 11, add 12.

To convert a 24-hour time to 12-hour:

If the hour is 00, replace with 12 and write 'am' after the time; if the hour is 01 to 09, remove the 0 and write 'am'; if the hour is 10 or 11, write 'am'; if the hour is 12, write 'pm'; if the hour is 13 to 23, subtract 12 and write 'pm'.

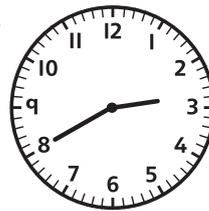
Lesson 5: Problem solving – units of time

→ pages 70–72

- Team A was the first to complete Stage I. It took 9 days.
 - It took 3 weeks and 2 days altogether for Team B to complete Stages 1 and 2.
 - Team A took 49 days.
Team B took 51 days.
Team A reached the summit 2 days before Team B.

- 1 minute 40 seconds
 - 3 minutes 50 seconds
 - 7 minutes 20 seconds
 - 1 hour 15 minutes
 - 3 hours 32 minutes

3.



4. Dan (21 months) > Ben (22 months) > Abdul (24 months) > Cerys (25 months)

5. The bus left the station at 12:27.

Reflect

Explanations may vary; for example:

Divide 108 by 12 to get 9 years.

End of unit check

→ pages 73–74

My journal

Answers will vary, but children should work out that 100 months is 8 years and 4 months, or convert their ages from years to months and compare.

**Power puzzle**

06:56 = 6:56 am

3 hours 46 minutes = 226 minutes

60 months = 5 years

clock showing 4 minutes to 6 = 17:56

8 weeks 4 days = 60 days

4 years 11 months = 59 months

clock showing 10 past 1 = 13:10

Odd one out is 01:02.