Week 6 Lesson 4

Can I convert between a 12 hour and 24 hour clock?

Fast Five

1. 120 minutes = ____hours
2. 1 hour = ____minutes
3. 120ml = ___l
4. 0.789kg = __g
5. 4 hours = ___minutes

Fast Five Answers

1. 120 minutes = 2 hours
2. 1 hour = 60minutes
3. 120ml = 0.12l
4. 0.789kg = 789g
5. 4 hours = 240minutes

- When telling the time we can use a 12-hour clock or a 24-hour clock.
- We know there are 24 hours in one day.
- When we use a 12-hour clock we split the day into two lots of 12.
- So there will be two of each time in the day.

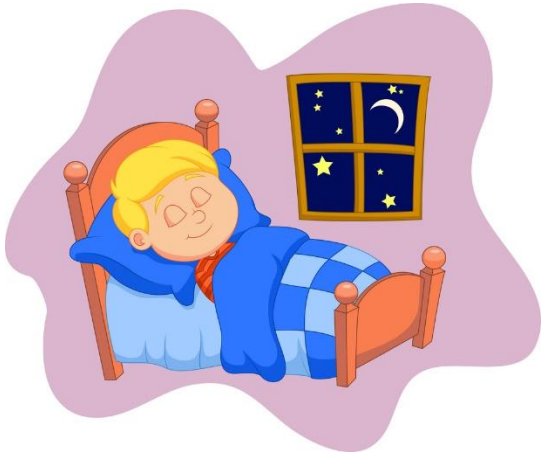
- 9:30 appears twice and so does 5 O'clock etc.

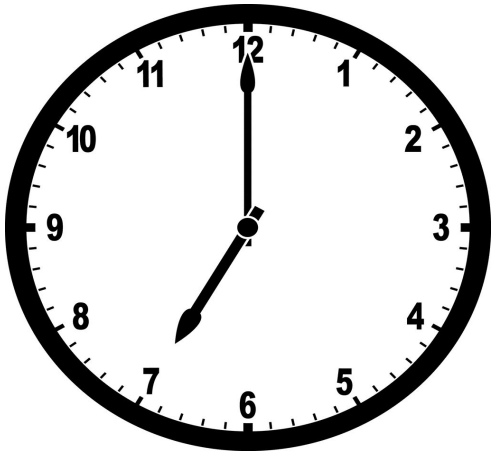
- When we use a 12-hour clock – times from midnight to midday are referred to as **a.m.**

- When we use a 12-hour clock – times from noon/midday to midnight are referred to as **p.m.**

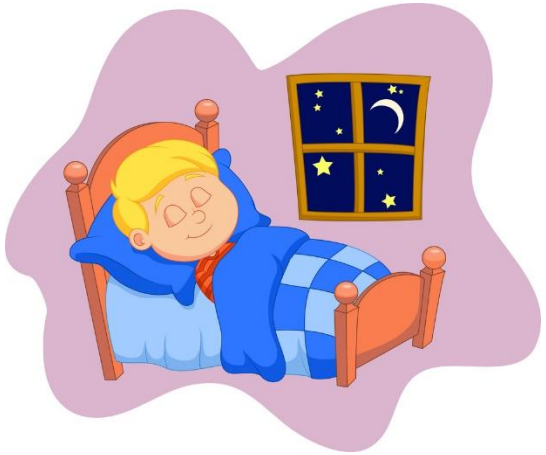
- So there is:
- 5:30am and a 5:30pm.
- 10:17am and 10:17pm. etc.

Can you tell the times? Be sure to include if they are a.m. or p.m.

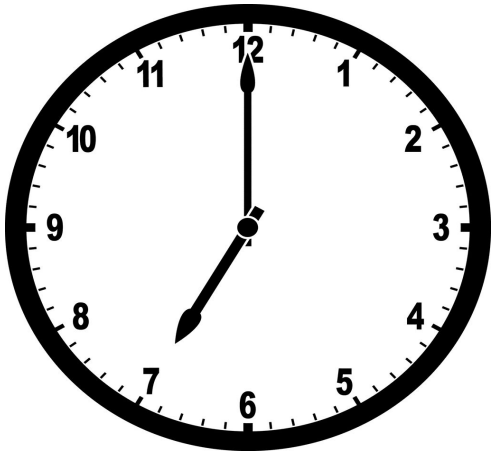




Can you tell the times? Be sure to include if they are a.m. or p.m.



11:00 pm



7:00 am

24-hour clock

- When telling the time, we can use a 12 hour clock or a 24 hour clock.
- When we use a 24 hour clock, we keep the day as 24 hours.
- The day starts at midnight, which is written as 00:00.

Conversion from 12-hour to 24-hour clock

Converting between a 12-hour clock and a 24-hour clock requires 2 steps:

Step 1 – check if your time is am or pm.

If it is ‘am’ you put it into a 4 digit format.

11:00am becomes 11:00.

If the hour is a single digit number a zero is placed before it.

7:00am becomes 07:00

*If the time is between 12:00am and 12:59am you take away 12 from the hours part e.g. 12.15am becomes 00:15

24-hour times always have 4 digits.

Step 2 - if your time was 1pm or later, you need to add 12 to the hours to convert into 24 hour clock e.g. 1:56pm is 13:56 and 2:15pm is 14:15.

The minutes do not change.

Converting to 24 hours

- 10:43a.m = 10:43 (this is already in a 4 digit format, so we leave the numbers the same and remove the **a.m.**)
- 6:56a.m = 06:56 (we add a zero at the front to make it into 4 digits and remove the **a.m**.)

- 4:15p.m = 16:15 (we add 12 hours and remove the **p.m.**)
- 8:35p.m = 20:35 (we add 12 hours and remove the **p.m**.)

Have a go

1. 6:15am =

2. 10:20am =

3. 2:10pm =

Have a go

1. 6:15am = 06:15 (we add a zero at the front to make it 4 digits and we lose the a.m)

2. 10:20am = 10:20 (we lose the a.m.)

3. 2:10pm = 14:10 (we add 12 hours and lose the p.m.)

Converting from 24-hour clock to 12-hour clock

If the time on the 24 hour clock is 12:00 or earlier (less) we have to:

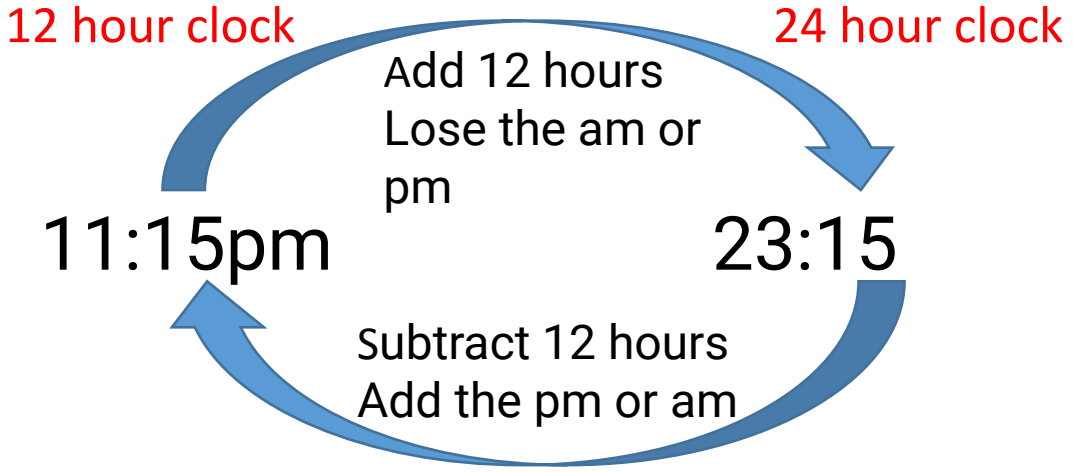
- put a.m. at the end
- Take away the a zero at the front of the number if it has one.

E.g.
07:15 becomes 7:15am (we add the a.m. and remove the zero)

11:28 becomes 11:28am (we add the a.m.)

Converting from 24-hour clock to 12-hour clock

If we are given a time in the 24 hour clock that is 13:00 or later we can convert it back to 12 hour by taking 12 hours away and adding the p.m.



e.g 23:15 = 11:15pm or 16:56 = 4:56pm

- If the time is between 00:00 and 00:59 we add 12 hours to convert it to 12 hours e.g. 00:16 = 12:16am

Remember when using a 12 hour clock you must say am or pm.

Have a go at these

1. 09:34 =
2. 11:35 =
3. 14:56 =
4. 23:10 =

Answers

1. 09:34 = 9:34am (we removed the zero and added a.m because it is after midnight and before midday)

2. 11:35 = 11:35am (we add a.m. because it is after midnight and before midday).

3. 14:56 = 2:56pm (we took 12 hours away and because it is after midday we added p.m).

4. 23:10 = 11:10pm (we took 12 hours away and because it is after midday we added p.m)