

## Helpful explanations of

- Weights and measures
- 12 and 24 hour clocks
- Temperature

And more, all in one handy booklet!

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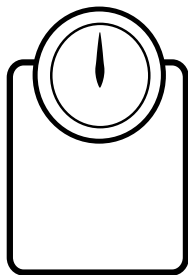
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# Using numbers in care work



*ml*



Part of the Learning through Work series

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# Using this booklet

Numbers play a vital role in care work today, so it's helpful to feel confident using them.

This booklet covers:

- Record keeping
- Measures
- 12 and 24 hour clocks
- Temperature... and more

The booklet is divided into **topics** (one per page).

It is designed for busy people – each topic can be read in less than three minutes.

You will find **learning questions** to discuss and also things you can do to **learn more**.

Use the booklet to develop your knowledge, skills and confidence about using numbers at work.

## How to use this booklet

- Find a couple of colleagues
- Read a topic together
- Agree what it means
- Discuss how it relates to your own work
- See if your supervisor or manager agrees
- Decide how you can use what you have learned to improve the quality of care

## Talking with colleagues is the key

The moment you start **talking** about something, you're **thinking** about it.

Once you start **thinking** about it, you're **learning**.

**Tip** Start with a topic that interests you.

Don't feel pressured – learn at your own pace and remember what they say:

*Days that make us happy, make us wise!*

# 1. Numbers in care work

We use numbers at work in many ways:

- Daily care tasks
- Monitoring changes in people's health and well-being (to support care planning)
- Admin for our employer

Most of these tasks involve some kind of **measurement**. Many require us to record a number. Some involve **calculations**.

## Measurement

We measure a thing to know **how much** of it there is. Measuring things allows us to ask and answer this sort of question:

- How far is it from  $a$  to  $b$ ?
- Has this person lost or gained weight?
- How much water does this glass hold?
- Is this room warm enough?
- When did this happen?
- How long does it take to do this?
- How much have I earned this month?

## Things we measure

- Length, height, distance
- Weight, mass
- Fluid volume / capacity
- Pressure
- Time
- Heat / cold
- Money

## Typical calculations

- Deciding which of two glasses holds more
- Doing a fluid balance chart
- Completing a financial transaction sheet
- Working out if you've time to do a task

## Learning questions

In your job, what measures do you work with?

What numbers must you record?

What calculations do you do?



## 2. Confidence matters

How we feel affects how we learn.

How **confident** do you feel about using numbers?

### Learning builds confidence

Many of us lack confidence with numbers. We feel anxious about things that involve numbers. Some of us feel we just can't do numbers.

That sort of anxiety saps our confidence. The less confident we feel, the harder it is to learn.

This booklet will help you learn about the numbers you use at work. Learning will make you feel more confident.

Feeling more confident will help you learn – and go on learning.



## Learning tips

Value your learning – numbers are **important**.

**Learn with colleagues** – talk about what you're doing. Encourage each other.

It's OK to make mistakes, you can **learn** from them.

When you want extra help, go to people who are **patient and encouraging**, not critical.

**Practise** what you learn!

## Learning question

How exactly will you practise what you learn?



## Things to know about the records you keep

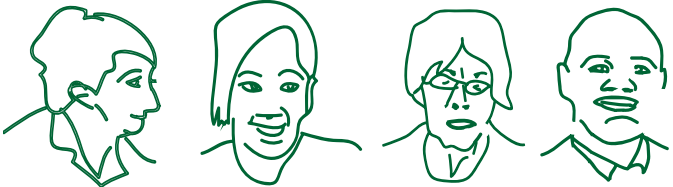
- Exactly what information is required
- Where to write the information
- How to write it (e.g. in black ink)
- Any special requirements (e.g. use the 24 hour clock when writing times)

It is also a good idea to know

- Who needs it and why
- How confidential it is

## Learn more

If you and your colleagues don't know all the above about the records you keep, ask your manager.



## 4. Filling in charts

Many records are collected on charts.

Here are three examples:

### *Financial transaction record sheet*

<i>Date</i>	<i>Money received</i>	<i>Receipt total</i>	<i>Money returned</i>	<i>Signature</i>
24/4/12	£25.00	£19.78	£5.22	D.Brollin

### *Bowel chart*

<i>Date</i>	<i>Time</i>	<i>Amount</i>	<i>Type</i>	<i>Initials</i>
12/5/12	15.30	small	Type 4	D.B.

### *Fluid balance chart*

<i>Intake (mls)</i>			<i>Output (mls)</i>			
<i>Time</i>	<i>Oral / Type</i>	<i>Total</i>	<i>Urine</i>	<i>Vomit</i>	<i>Other</i>	<i>Total</i>
08.00	230ml / tea	230ml				
09.00	200ml / water	430ml	150ml			150ml

## How charts work

Charts have **rows** and **columns**.

Rows go across: →

Columns go down: ↓

Here is how it works on the fluid balance chart.

Each **column** has heading at the **top**.

In the boxes below *Oral / type* we put the amount and type of fluid drunk.

Each **row** has a heading on the **left side**.

Entries for 8.00 o'clock go in the *08.00* row etc.

columns go down

	↓	↓	↓	↓	↓	↓
rows go across →	<i>Time</i>	<i>Oral / Type</i>	<i>Total</i>	<i>Urine</i>	<i>Vomit</i>	<i>Oth</i>
→	08.00	→	→			
→	09.00	↓				
→	10.00	↓				

## Top tip

If you are at all uncertain how to fill in a chart, ask your manager.

# 5. UK measures

In the UK we now **mostly** use metric units. We do, however, still use some **imperial** units as well.

## What is a *unit*?

Every system of measurement is based around what we call a **unit**. By *unit* we mean a fixed quantity of whatever we are measuring, e.g.

- length = the metre (m)
- weight = the gram (g)
- money = the pound (£)

We can divide this unit, e.g. £1 = 100p.

We can multiply it, e.g. 1000 g = 1 kilogram.

The unit is the **heart** of the system.

## Learning questions

At work, do you use metric, imperial or both?

If you use both, what do you measure in metric, what in imperial?

Which are you more comfortable with – metric or imperial? What about your colleagues?

What about the people you care for?

## At a glance: metric and imperial units

New system = metric

Old system = imperial

### Length, height, distance

*Metric*

kilometre / metre /  
centimetre / millimetre

*Imperial*

mile / yard / foot / inch

### Weight

*Metric*

kilogram / gram /  
milligram

*Imperial*

stone / pound / ounce

### Fluid volume / capacity

*Metric*

litre / centilitre /  
millilitre

*Imperial*

gallon / quart / pint /  
fluid ounce



# 6. Metric system

Metric measures are **decimal**, i.e. based on the number 10.

## Learning question

There are 10 millimetres in a centimetre.

There are 100 centimetres in a metre.

So – how many millimetres in a metre?

## Weight

Unit = gram (g)      *500 grams of butter*

1g can be divided into 1000 milligrams (mg).

1g can also be divided into 1 000 000 micrograms (mcg) – a very, very small measure.

One thousand grams make a kilogram (kg).

A level teaspoon of sugar weighs about 4g.

## Length / height / distance

Unit = metre (m)      *She is 1.6 metres tall*

1m can be divided into 100 centimetres (cm).

1m can be divided into 1000 millimetres (mm).

A thousand metres make a kilometre (km).

## Fluid volume / capacity

Unit = litre (l)                      *a litre of milk*

1l is sometimes divided into 100 centilitres (cl).

1l is often divided into 1000 millilitres (ml).

## Useful metric words

Kilo =        1000                      *kilometre, kilogram*

Deci =         $\frac{1}{10}$                               *decimetre, decilitre*

Centi =        $\frac{1}{100}$                            *centimetre, centilitre*

Milli =         $\frac{1}{1000}$                            *millimetre, millilitre*

Micro =        $\frac{1}{1\,000\,000}$                       *microgram*

## Did you know?

The UK changed to a metric money system in 1971. Before 1971, we used pounds, shillings and pence (£-s-d). There were 12 pennies in a shilling and 20 shillings in a pound.

Coins included the sixpenny bit, the florin, the half crown.

There was a ten shilling note as well as a one pound note.



# 7. Metric ↔ imperial

As well as metric measures, some imperial units of measure are still used in the UK.

Here are the most important, with *approximate* metric values.

## **Length/height/distance** inch, foot, yard, mile

1 inch (in)	<i>25.4 mm / 2.54 cm</i>
12 inches = 1 foot (ft)	<i>305 mm / 30.5 cm</i>
3 ft = 1 yard (yd)	<i>914 mm / 91.4 cm</i>
5,280 ft = 1 mile (m)	<i>1609 m / 1.6 km</i>

## **Weight** ounce, pound, stone

1 ounce (oz)	<i>28.4 g</i>
16 oz = 1 pound (lb)	<i>454 g / 0.45 kg</i>
14 lb = 1 stone (st)	<i>6350 g / 6.35 kg</i>

## **Fluid volume** fluid ounce, pint, quart, gallon

1 fluid ounce (fl oz)	<i>28.4 ml</i>
20 fl oz = 1 pint (pt)	<i>568 ml</i>
2 pt = 1 quart (qt)	<i>1136 ml / 1.136 litres</i>
4 qt = 1 gallon (g)	<i>4546 ml / 4.5 litres</i>

## Converting measures

Convert measures with a calculator.

One inch equals 25.4 millimetres, so six inches equal six lots of 25.4 millimetres.

To calculate how many millimetres that is, just multiply 25.4 by the number of inches – in this case, six.

**Inches (in) → millimetres (mm)**

x by 25.4      e.g.  $6 \text{ in} \times 25.4 = 152.4 \text{ mm}$

To do the opposite and convert millimetres into inches, divide the millimetres by 25.4. Why? Because there are 25.4 millimetres in one inch.

**Millimetres (mm) → inches (in)**

÷ by 25.4      e.g.  $152 \text{ mm} \div 25.4 = 6 \text{ in}$

# 8. Manual handling\*

For safer moving and placing, first consider

- How much the load weighs
- How high you want to raise (or lower) it
- How good a grip you can get on it
- Whether you will use one hand or two
- How close to your body you can hold it
- Whether you are standing or sitting, and
- If you have to carry it, how far

Then consider yourself. Think about

- Your size, strength and fitness
- Any back, muscle or heart problems
- How experienced you are at the task.

Finally, think if it is a **one** or a **two-person job**.

*\*Based on advice from the Health and Safety Executive, supported by scientific studies.*

## How much can I move?

**Sitting** With a good grip, using both hands

- Women: 3kg
- Men: 5kg

(A litre of juice weighs 1kg.)

**Standing** With a good two-handed grip, arms close to the body, at waist height

- Women: 16kg
- Men: 25kg

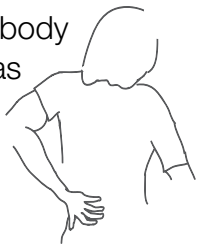
## How far can I carry?

For up to 10 metres, held against the body

- Women: 13-16kg
- Men: 20-25kg

## Top tip: Avoid back strain!

Always hold the item as close to your body as possible, at waist height. As soon as the item moves away from your body, a strain is put on your lower back.



# 9. Days and dates

## Seconds → minutes → hours → day

60 seconds = 1 minute      60 minutes = 1 hour

24 hours = 1 day

## Days → weeks → months → year

7 days = 1 week

52 weeks = 1 year

12 months = 1 year

One quarter = 3 months

365 days = 1 year

366 days = leap\* year (1 year in 4)

## Seven days of the week

*Weekdays*    Monday    Tuesday    Wednesday

Thurday    Friday

*Weekend*    Saturday    Sunday

## \*Did you know?

Earth takes  $365 \frac{1}{4}$  days to go round sun.

A leap year collects four 'quarter days'.

## Date

By *date* we mean **day-month-year**

e.g. *21 April 2011*

DD-MM-YYYY means 21 - 04 - 2011

DD-MM-YY means 21 - 04 - 11

UK dates are **always** written day-month-year

**dob** = date of birth      **b** = born

## UK bank holidays

- New Year's Day *in January*
- Good Friday *in March or April*
- Easter Monday *in March or April*
- Early May Bank Holiday *in May*
- Spring Bank Holiday / Whitsun *in May*
- Summer Bank Holiday *in August*
- Christmas Day *in December*
- Boxing Day *in December*

*Scotland and N. Ireland have one or two extra holidays*



# 10. Months

## Twelve months of the year

1. **Jan**uary = 31 days
2. **Feb**ruary = 28 days (*29 days in a leap year*)
3. **Mar**ch = 31 days (*last Sunday, clocks go forward*)
4. **Apr**il = 30 days
5. **May** = 31 days
6. **Jun**e = 30 days
7. **Jul**y = 31 days
8. **Aug**ust = 31 days
9. **Sep**tember = 30 days
10. **Oct**ober = 31 days (*last Sunday, clocks go back*)
11. **Nov**ember = 30 days
12. **Dec**ember = 31 days (*Christmas = 25 Dec*)

## Four seasons

*Spring* March, April, May

*Summer* June, July, August

*Autumn* September, October, November

*Winter* December, January, February

## How many days in the month?

*Thirty days hath September*

*April, June, and November*

*All the rest have thirty-one*

*Save February, with twenty-eight days clear*

*And twenty-nine each leap year*

## How many weeks in a month?

7 days = 1 week      4 weeks = 28 days

**Most months = four weeks + two or three days**

April, June, September, November = 30 days

30 days = 4 weeks (28 days) + 2 days

January, March, May, July, August, October and  
December = 31 days

31 days = 4 weeks (28 days) + 3 days

February = 28 days = 4 weeks exactly

# 11. Datemarks

Most packaged **food** is marked with a *use by* or a *best before* date.

**Use by** dates are about **food safety**.

**Never** eat or serve food after its *use by* date.

Even if the label says *eat within a week of opening*, food must **not** be eaten after its *use by* date. It is **illegal** to sell food after its *use by* date.

**Best before** dates are about **food quality**.

Food is better (i.e. more nutritious and/or tasty) before its *best before* date, but it is safe to eat after – except for **eggs**.

**Never** eat eggs after their *best before* date, for risk of food poisoning from salmonella bacteria.

*Best before* is also shown as *Best before end* or *B.B.E.*

**Did you know?**

*Sell by/display until* dates are for shop staff only. They say when to remove an item from sale.

**Always** follow food storage instructions, e.g. *refrigerate, freeze on day of purchase, defrost thoroughly and use within 24 hours.*

Food that is **not** stored properly may go bad **before** its *use by* or *best before* dates.

**Medicine** comes with an *expiry* or *discard* date (after which it may no longer be effective) shown on the side or bottom of the package.

**Datemarks** may be printed on the package or stamped into it. They can be hard to see.

Typical datemarks:

**Day and month** e.g. 24Jun 24-6 24.6 24/6

**Month and year** e.g. Jun2013 6 2013 06/13

**Day, month and year** e.g. 24.06.13 24Jun13  
or 24/6/2013

### Learning question

What **dates** do the datemarks below show?

BBE:21122015      11/2011      Exp26Apr

20122013      BBEnd01/14      12 12 12

# 12. The 12 hour clock

A traditional clock (or watch) counts 12 hours.

We call this the **12 hour clock**.

It divides the day into two parts: **before** and **after noon** (midday). That is why 3.00 can be 3 in the morning or 3 in the afternoon.

To avoid confusion we use **A.M.** and **P.M.**

They are written **either** *A.M.* / *P.M.* or *a.m.* / *p.m.*

3.00 a.m. = 3 in the morning

3.00 p.m. = 3 in the afternoon

8.00 a.m. = 8 in the morning

8.00 p.m. = 8 in the evening

Midnight to 12 noon = a.m.

12 noon to midnight = p.m.

## What do **A.M.** and **P.M.** stand for?

A.M. stands for *ante meridian*.

P.M. stands for *post meridian*.

In Latin, *ante* = *before*, *meridian* = *noon* and *post* = *after*.

A.M. = *before noon*. P.M. = *after noon*

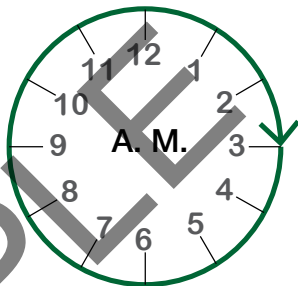
## 12 midnight

then it's A.M.

**A.M. = 12.01 → 11.59**

in the morning

*Sleep, get up, breakfast, kids to school, off to work mid morning tea break etc and soon it's midday...*



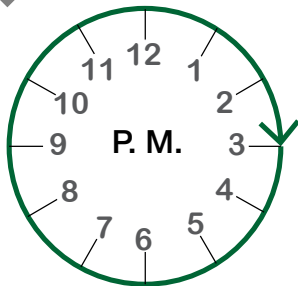
## 12 noon

then it's P.M.

**P.M. = 12.01 → 11.59**

at night

*Lunch, afternoon, go home, sort the kids out, evening meal, TV, off to bed etc and then it's mid-night again...*



## Did you know?

Latin was the language of ancient Rome. Later, Latin became the language of science in England and other European countries.

# 13. The 24 hour clock

There are 24 hours in one day.

The **24 hour clock** counts these hours from **midnight to midnight**, e.g. midnight Monday-Tuesday to midnight Tuesday-Wednesday.

The 24 hour clock goes from 00.00 (midnight) to 23:59 (one minute to midnight – or 11.59 p.m. in the 12 hour clock).

## 24 and 12 hour clock times

00.00 = *midnight*                      00.01 = *12.01 a.m.*

01.00 = *1 a.m.*                              06.20 = *6.20 a.m.*

12.00 = *noon (midday)*                13.00 = *1 p.m.*

18.20 = *6.20 p.m.*                        22.17 = *10.17 p.m.*

**Note** 24 hour times below ten start with 0 (zero).

## Why use the 24 hour clock?

The 24 hour clock makes it impossible to confuse the hours before noon with the hours after noon, e.g.

7 in the morning = 07.00

7 in the evening = 19.00.

## How to convert between clocks

### 12 → 24 hour clock

Add the afternoon time to 12, e.g. if it's 3 p.m.

$$12 + 3 = 15.00$$

$$10 \text{ p.m.} = 12 + 10 = 22.00$$

### 24 → 12 hour clock

Subtract 12 from the afternoon time, e.g.

$$15.00 = 15 - 12 = 3.00 \text{ p.m.}$$

$$22.00 = 22 - 12 = 10.00 \text{ p.m.}$$

### Learning questions

Which is used where you **work**, the 12 or the 24 hour clock – and why?

Which do the people you care for use?

Which do you prefer?

If you have to do a calculation involving time, is it easier to use the 12 or 24 hour clock? Why?

Do your colleagues feel the same way?





# 14. Clock table: 12 ↔ 24

## Which is better: the 12 or the 24 hour clock?

Both systems work, if used correctly – and *consistently*.

If using the 12 hour clock, make sure you **always** write a.m. or p.m. (even when it seems obvious which you mean).

If using the 24 hour clock, make sure you get the hours right (e.g. don't write 15.30 when you mean 17.30).

Many employers now favour the 24 hour clock, but many of the people we care for use the 12 hour clock so it is a good idea to know both.

### Top tip

For records and reports, everyone should **use one clock system and stick to it**.

~~Never mix 12 and 24 hour clock times~~, particularly in written records and reports. That could lead to **serious** confusion.

## At-a-glance 12–24 hour clock converter

12 hour	24 hour	12 hour	24 hour
<i>12 midnight</i>	= 00.00	<i>12 noon</i>	= 12.00
<i>1.00 a.m.</i>	= 01.00	<i>1.00 p.m.</i>	= 13.00
<i>2.00 a.m.</i>	= 02.00	<i>2.00 p.m.</i>	= 14.00
<i>3.00 a.m.</i>	= 03.00	<i>3.00 p.m.</i>	= 15.00
<i>4.00 a.m.</i>	= 04.00	<i>4.00 p.m.</i>	= 16.00
<i>5.00 a.m.</i>	= 05.00	<i>5.00 p.m.</i>	= 17.00
<i>6.00 a.m.</i>	= 06.00	<i>6.00 p.m.</i>	= 18.00
<i>7.00 a.m.</i>	= 07.00	<i>7.00 p.m.</i>	= 19.00
<i>8.00 a.m.</i>	= 08.00	<i>8.00 p.m.</i>	= 20.00
<i>9.00 a.m.</i>	= 09.00	<i>9.00 p.m.</i>	= 21.00
<i>10.00 a.m.</i>	= 10.00	<i>10.00 p.m.</i>	= 22.00
<i>11.00 a.m.</i>	= 11.00	<i>11.00 p.m.</i>	= 23.00
<i>12 noon</i>	= 12.00	<i>12 midnight</i>	= 00.00

# 15. How to calculate time (1)

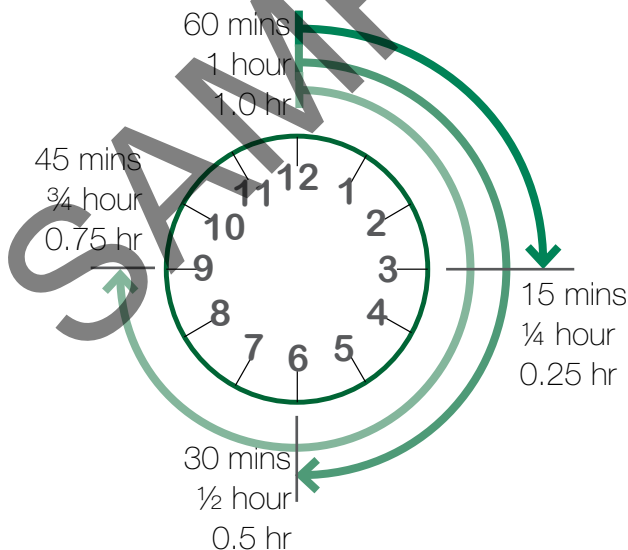
We often do **calculations** that involve time, e.g.

*How much time should I allow for this...?*

*When do I have to stop doing this?*

*How much time is there between now and 2.20?*

Here are some tips to help you answer questions like these quickly and accurately.



## How the hour divides into minutes

Do you know all these useful facts?

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

$$30 \text{ mins} = \frac{1}{2} \text{ hour}$$

$$15 \text{ mins} = \frac{1}{4} \text{ hour}$$

$$45 \text{ mins} = \frac{3}{4} \text{ hour}$$

$$3 \text{ lots of } 5 \text{ mins} = 15 \text{ mins} = \frac{1}{4} \text{ hour} \quad (5)(5)(5)$$

$$4 \times 5 \text{ mins} = 20 \text{ mins} \quad (5)(5)(5)(5)$$

$$5 \times 5 \text{ mins} = 25 \text{ mins} \quad (5)(5)(5)(5)(5)$$

$$6 \times 5 \text{ mins} = 30 \text{ mins} = \frac{1}{2} \text{ hour} \quad (5)(5)(5)(5)(5)(5)$$

$$12 \times 5 \text{ mins} = 60 \text{ mins} = 1 \text{ hour} \quad (5)(5)(5)(5)(5)(5)(5)(5)(5)(5)(5)(5)$$

$$3 \text{ lots of } 20 \text{ mins} = 60 \text{ mins} = 1 \text{ hour} \quad (20)(20)(20)$$

$$6 \times 10 \text{ mins} = 60 \text{ mins} = 1 \text{ hour} \quad (10)(10)(10)(10)(10)(10)$$

$$4 \text{ lots of } 15 \text{ mins} = 60 \text{ mins} = 1 \text{ hour}$$

$$3 \times 15 \text{ mins} = 45 \text{ mins} = \frac{3}{4} \text{ hour}$$

$$2 \times 15 \text{ mins} = 30 \text{ mins} = \frac{1}{2} \text{ hour}$$

## Learning question

How many minutes in 0.5 hr?

## 16. How to calculate time (2)

How long (i.e. how much time) is it from 11.15 a.m. to 1.45 p.m.?

One way to find out is to **count on**.

11.15 to 12.15 = one hour

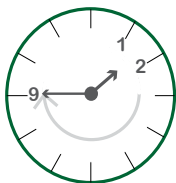
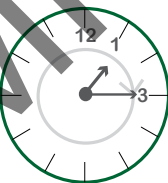
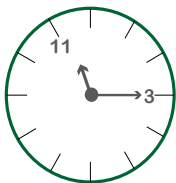
12.15 to 1.15 = another hour

1.15 to 1.45 = 30 minutes      2 hours 30 mins

11.15 to 12.15  
= one hour

12.15 to 1.15  
= one hour

1.15 to 1.45  
= 30 minutes



### In the 24 hour clock

Take 11.15 away from 13.45.

$$\begin{array}{r} 13.45^* - \\ \underline{11.15} \\ 2.30 \end{array}$$

\*1.45 p.m. (12 hour clock) = 13.45 (24 hour clock)

**Check your answer** Add two and a half hours to 11.15.  $11.15 + 2.30 = 13.45$

**Can I fit it all in?** It is now 4.30 p.m.

*It'll take me 20 minutes to get to Client X's.*

*Then five minutes to park and get in.*

*Then 15 minutes to get her tea, check her medication and fill out the care plan.*

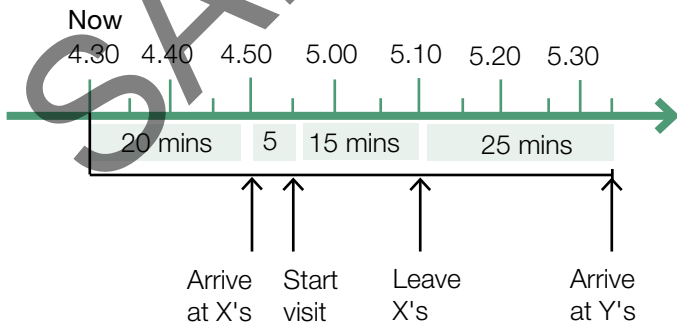
*Client Y wants me there by half past five today.*

*It'll take me 25 minutes to get to Client Y.*

*Can I make it in time?*

$$4.30 + 20 \text{ mins} = 4.50 + 5 \text{ mins} = 4.55 + 15 \text{ mins} = 5.10 + 25 \text{ mins} = 5.35$$

Think of it on a **time line**.



*I'm likely to be a little late. Better call the office.*

# 17. Temperature

**Temperature** is a measure of heat.

There are two main temperature **scales**, both named after the scientists who created them in the 1700s: Celsius and Fahrenheit.

Both scales measure heat in **degrees**.

The symbol for degree is  $^{\circ}$ .

Both scales measure temperatures **below** zero, as well as **at** and **above** zero.

**Celsius** (say it: sel-see-us)

Water boils at  $100^{\circ}\text{C}$  and freezes at  $0^{\circ}\text{C}$ .

Most of the world, including the UK, uses Celsius (once called *centigrade* in the UK).

The United States and a few other countries use

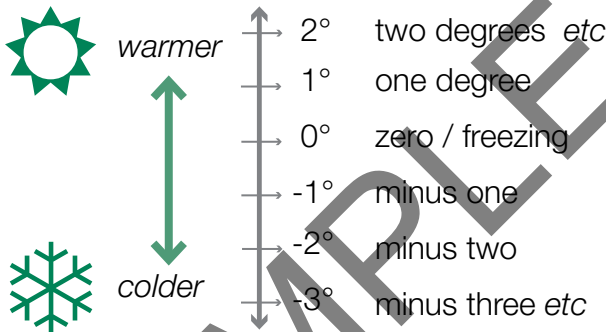
**Fahrenheit** (say it: fa-ren-hite). On this scale,

Water boils at  $212^{\circ}\text{F}$  and freezes at  $32^{\circ}\text{F}$ .

## How cold is cold?

The lowest possible temperature is  $-273^{\circ}\text{C}$ . This is absolute zero, no heat at all. Brrr!

## Using the Celsius scale

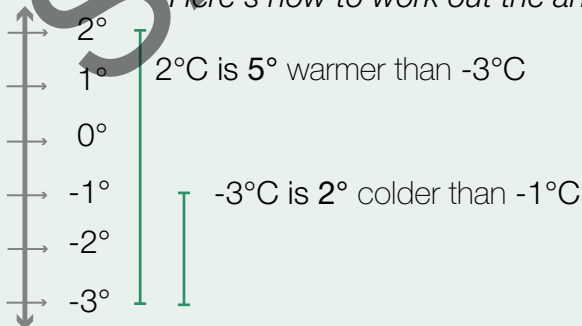


## Learning questions

What's the difference between  $2^{\circ}\text{C}$  and  $-3^{\circ}\text{C}$ ?

What is it between  $-3^{\circ}\text{C}$  and  $-1^{\circ}\text{C}$ ?

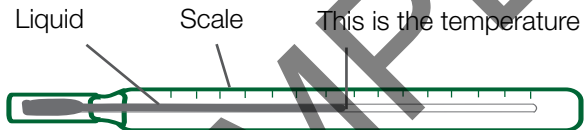
*Here's how to work out the answer:*



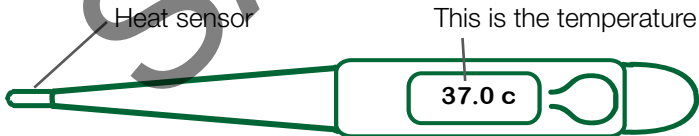


# 18. Thermometers

Traditional thermometers use thin glass tubes of liquid mercury or coloured alcohol. Heat expands the liquid, making it rise up the tube. The tube is marked with a scale. It takes several minutes to take a temperature with a traditional thermometer.



**Digital thermometers** use electricity to measure heat. They display the temperature on a screen. They work faster than glass thermometers.



## Did you know?

Thermometer comes from two Greek words, *therme*, heat, and *metron*, measure.

**Room thermostats** help us control the temperature of a room.

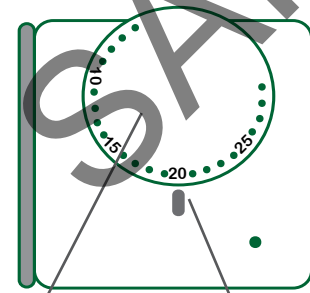
We set the thermostat to the temperature we want. It controls the heating to keep the room at that temperature.

Older thermostats are **mechanical**. We twist a dial to set them.

Modern thermostats are **digital**, with buttons to press and a display screen.

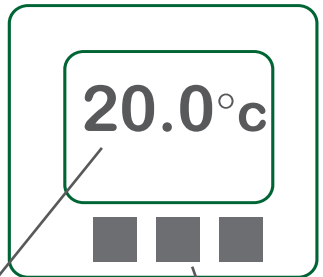
*Mechanical thermostat*

*Digital thermostat*



Dial

This is the temperature setting



Buttons

# 19. Useful temperatures

**Body temperature** should be around 37°C

Note that it is normal for human body temperature to vary by a degree or two.

**Room temperature** 18°C to 24°C = safe  
16°C or lower = dangerous for older people  
25°C or higher = dangerous for older people

**Bath water**

Above 37°C, but **must be** below 43°C.

Water above 43°C scalds and is dangerous.

**Food safety**

Fridge: 1 to 4°C (always below 5°C)

Freezer: -18°C (some may be set at -13°C)

**Danger zone:** Bacteria can multiply in food stored at temperatures between 5 and 63°C

**UK outdoor temperatures**

Typical January outdoors temperature: 8°C

Typical August temperature: 20°C

## Converting Celsius and Fahrenheit

$$^{\circ}\text{F} \rightarrow ^{\circ}\text{C}: ^{\circ}\text{F} - 32 \quad \times 5 \quad \div 9 = ^{\circ}\text{C}$$

For a rough answer: subtract 30, divide by 2

$$^{\circ}\text{C} \rightarrow ^{\circ}\text{F}: ^{\circ}\text{C} \times 9 \quad \div 5 \quad + 32 = ^{\circ}\text{F}$$

For a rough answer: multiply by 2, add 30

Write other useful temperatures here:

.....

.....

.....

.....

.....

# 20. Pay

To budget successfully, it's important to understand how your pay is calculated.

## Useful pay questions

Is my pay based on

- An hourly wage?
- A weekly wage?
- A monthly wage?
- An annual salary?

Do my hours stay the same each week/month?

How much tax and national insurance do I pay?

Am I entitled to holiday pay and/or sick pay?

Am I paid for bank holidays?

Do I earn extra for different types of work, e.g. overtime, night shift?

## How much do I earn a year?

Weekly wage x 52

e.g. £290.00 x 52 weeks = £15080.00

Monthly wage x 12

e.g. £1256.67 x 12 = £15080.00

## Pay slip terms

Every employer's pay slip is a little different. Ask your administrator to explain the items on your pay slip. Note what each item means. Here is some useful info to help you:

**NI Number** = Your National Insurance number

**Tax Code** = Information from HMRC\* telling your employer how much tax to take out of your pay

**Gross Pay** = Your pay **before** tax and any other deductions (e.g. NI)

**Tax** = Income tax being deducted from your gross pay

**NI** = National insurance being deducted from your gross pay (to help pay for state benefits)

**Total Deductions** = Total amount deducted from your pay

**Net Pay** = Your pay **after** deductions

\*Her Majesty's Revenue and Customs, the tax office

# 21. Quiz

1. What sort of things do we measure at work?
2. How does learning boost confidence?
3. What should you know about the records you keep?
4. Which goes up and down: a row or a column?
5. What is a *unit* of measurement?
6. How many g in a kg?
7. How many lb in a st?
- 8. Would it be safe for a woman to move a box on her own that weighed 12kg?**
9. In the UK, do we write dates *day-month-year* or *month-day-year*?
10. How many days in February?
11. The food packet says BBE: 21Jul. Today is 23 July. Is the food safe to eat?
12. What does *a.m.* mean?

13. If you start at 08.30 and finish at 17.30, how many hours do you work?
14. What is 7.45 p.m. in the 24 hour clock?
15. How many lots of 5 minutes are there in an hour?
16. It's 15.35. Your next job will take 45 minutes. What time will you be finished?
17. How many degrees between  $-3^{\circ}\text{C}$  and  $8^{\circ}\text{C}$ ?
18. What does a thermostat do?
19. What can happen in the Danger Zone?
- 20. What's the difference between gross pay and net pay?**

The information you need to answer these and many more questions is in this booklet.

*For answer 1, see page 1. See page 2 for answer 2 etc.*

### **Bonus Q!**

What temperature is safe for bath water?



# What next?

You may find some of the other booklets in this series useful.

**Number skills for care workers** explains fractions, decimals, percentages and more.

**Talking about how much, how often** looks at how we say numbers, quantities, times and dates.

**Physical health** explains important aspects of how the body works, plus the language we use when we talk about physical health.

**Talking about bodily functions and feelings** looks at the everyday expressions we use to talk about our bodies and how we are feeling.

For more on developing your **care work** knowledge and skills, including qualifications:

- Visit the **Skills for Care website** at
- [www.skillsforcare.org.uk](http://www.skillsforcare.org.uk)
- Go to the *Developing skills* section

## Learning through Work series

- > Reporting and other care work writing
- > Writing skills for care workers
- > Talking about bodily functions and feelings
- > Physical health
- > Using numbers in care work
- > Number skills for care workers
- > Talking about how much, how often

SAMPLE

SAMPLE