
11

Resources Online
PowerPoint Slides
Worksheets
Videos
Games

www.reachoutcf.com/resources

www.reachoutcf.com/maths-resources

Pass Functional Skills

A really useful website for your studies and revision.

Entry Level 3 →

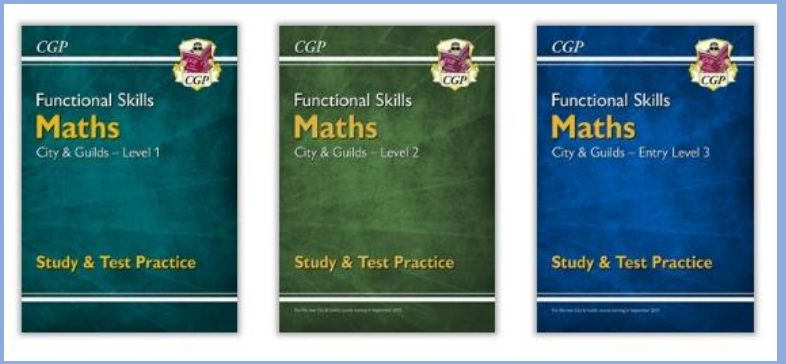
https://passfunctionalskills.co.uk

- Study Guides
- Practice Questions
- Video Demos
- Past Papers

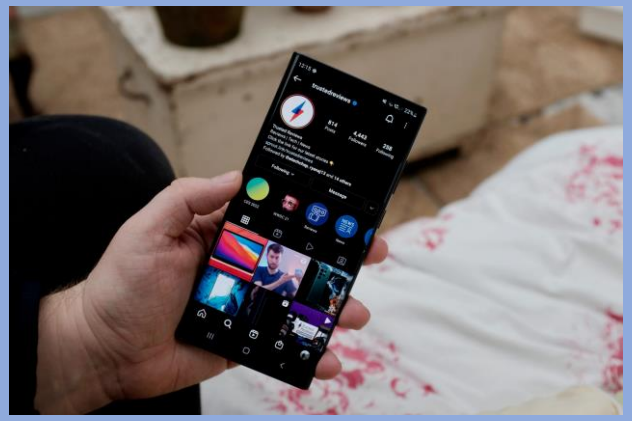
Level 1 →

Introductions

- The CGP textbooks are a fantastic resource for your revision.

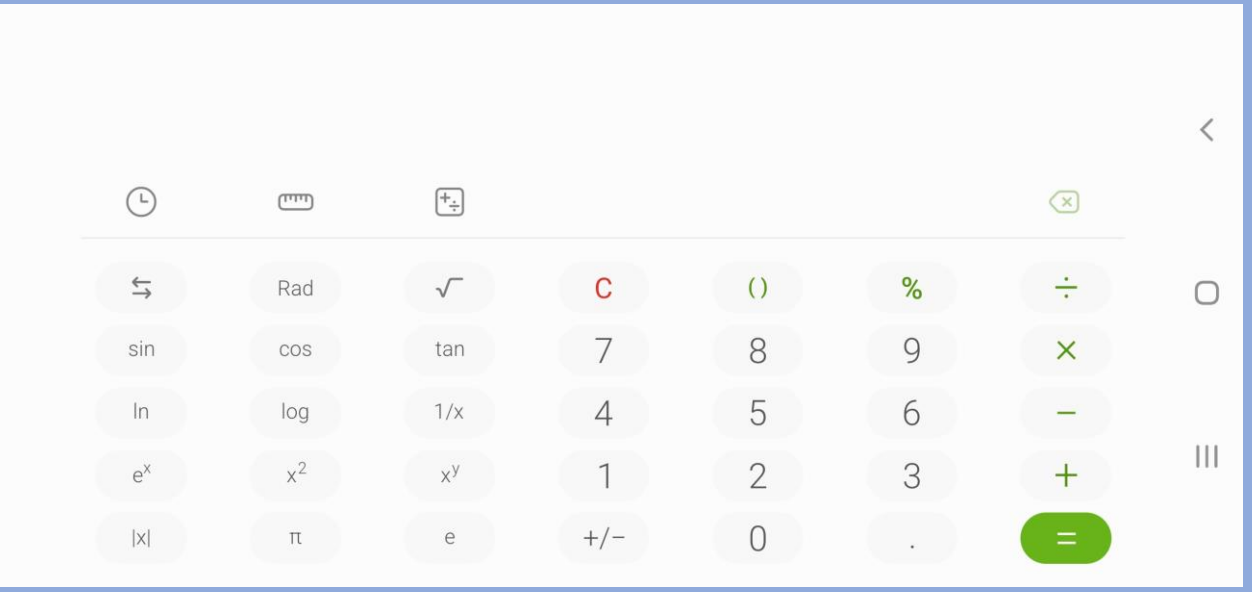


- You can use your phone when prompted, and as a calculator, but please keep it on silent during the lesson.

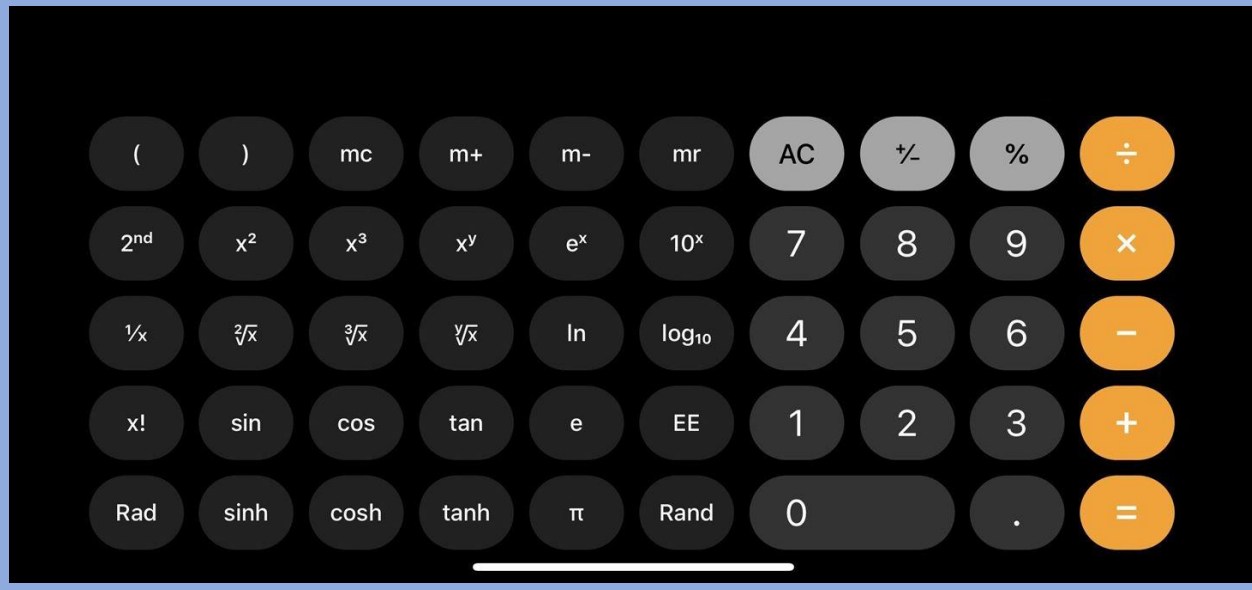


- Please make a note of your scores for interactive games as they let me know how well you are progressing.

Android



Apple



Rotate your phone in the calculator app to reveal additional functions.

Accessibility – For home study

- You can use your phone to read text for you.
- Download the app Google Lens.
- Select the Text option from the bottom of the screen.
- Take a picture of the text.
- Click the Listen button.
- The text will be read to you.
- Note: Apps can sometimes make mistakes so be careful to watch the moving highlights on the screen.

Download

https://play.google.com/store/apps/details?id=com.google.ar.lens&hl=en_GB&gl=US

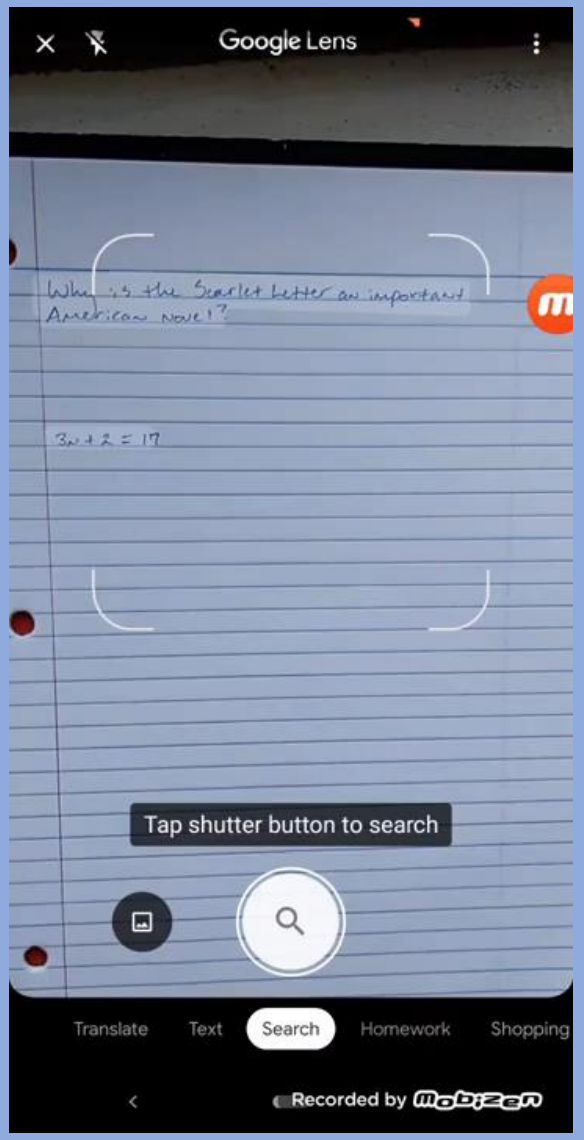
Using Google Lens

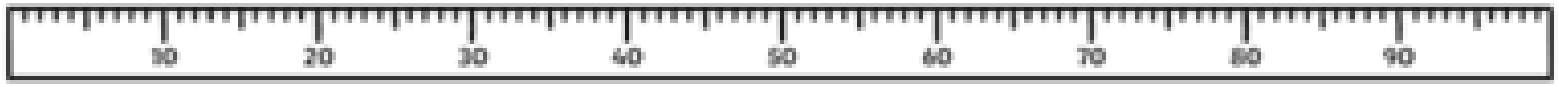
https://www.youtube.com/watch?v=dkvo50_UAqU

Google Lens can help with your homework!

The Google Lens Homework Help – TracSoft Inc
https://www.youtube.com/watch?v=SOC-d4VDKOY

- Always attempt questions first before using the application.
- If you do use Google Lens to solve a Maths problem, make sure you follow through the solution carefully, making sure you understand the steps it is showing you.
- You won't be able to use Google Lens in an exam, so once again, make sure you understand the process it is showing you.
- And don't forget…ALWAYS READ THE QUESTION…the question may ask for a written answer e.g. Bob does the following calculation…was he right? (Answer Yes or No with a sentence).





Money, Length and Angles

Lesson 11

Lesson Intentions: Monday 26th February 2024

Part 1: Money

- Calculate with money using decimal notation and express money correctly in writing in pounds and pence. (E3.M10)
- Round amounts of money to the nearest £1 or 10p. (E3.M11)
- Calculate simple interest in multiples of 5% on amounts of money. (L1.M18)
- Calculate discounts in multiples of 5% on amounts of money. (L1.M19)

Part 2: Length and Angles

- Compare metric measures of length including millimetres, centimetres, metres and kilometres (E3.M15)
- Use angles when describing position and direction, measuring angles in degress (L1.M26)

Section 2: Measure, Shape & Space
Part 1: Money

In this lesson we will look at UNSDG 1 – No Poverty

United Nations Sustainable Development Goals


Recap

Recap – Last lesson we looked at:

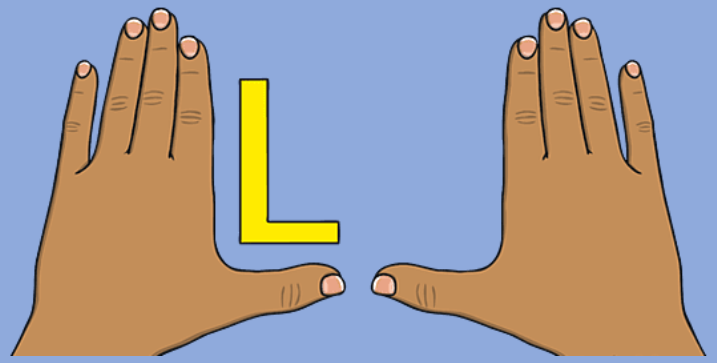
- Navigation: Distance, Angles & Bearings; Map Scales and Coordinates.
- Education for Sustainable Development – UNSDG 10 – Reduced Inequalites

Today, in session 1, we will have a quick recap of Navigation before moving on to Money.

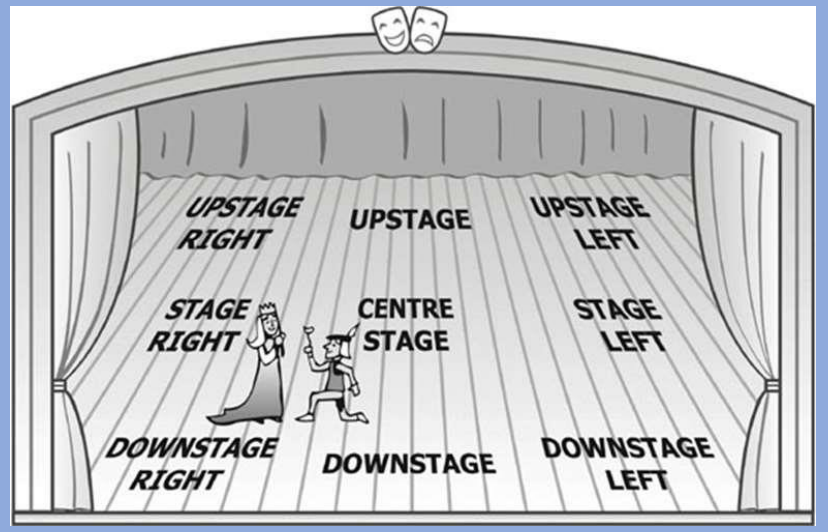
In session 2, we will look at Length. There will also be time for private study and/or use of Skills Forward.

Describing Movement – Left and Right

- Left and Right

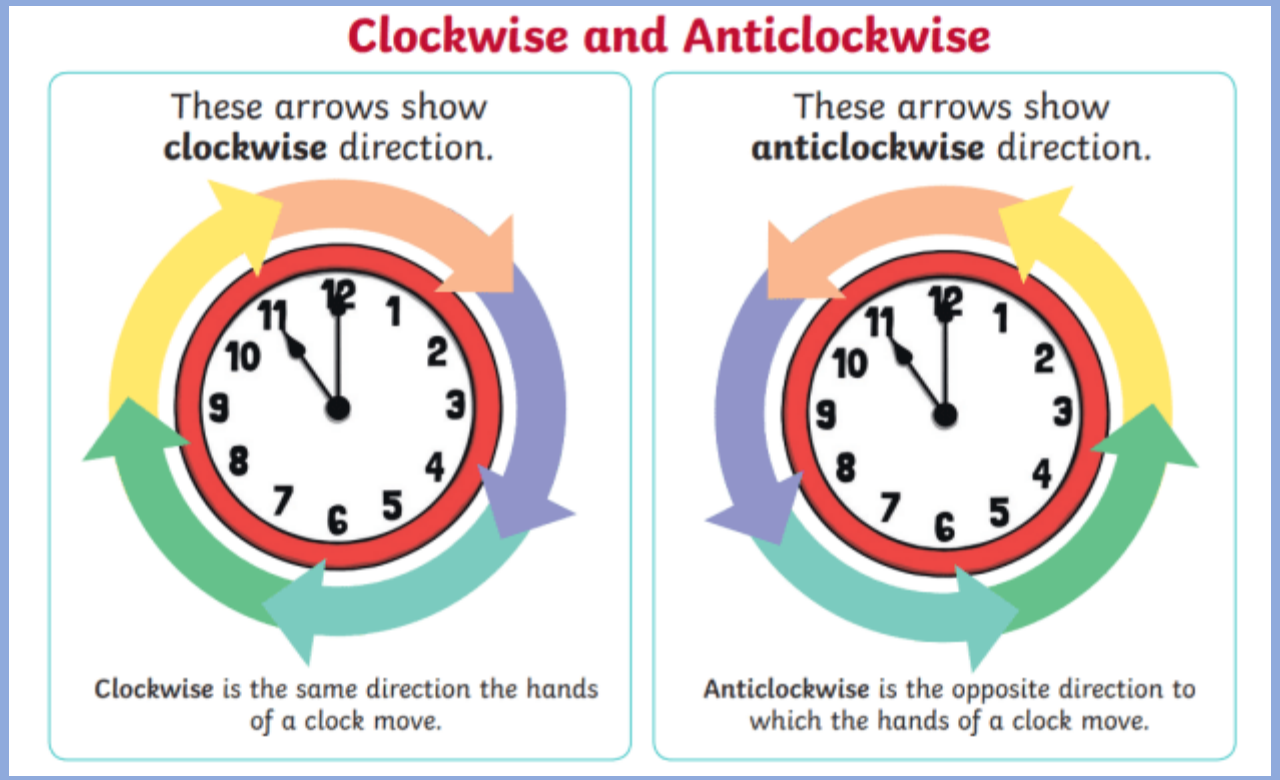


- Remember, if you are facing somebody, their left and right will be reversed from your perspective. A similar concept would be watching actors on a stage – stage left and stage right.



Describing Movement – Clockwise and Anticlockwise

- We can describe turning movements with reference to a clock.

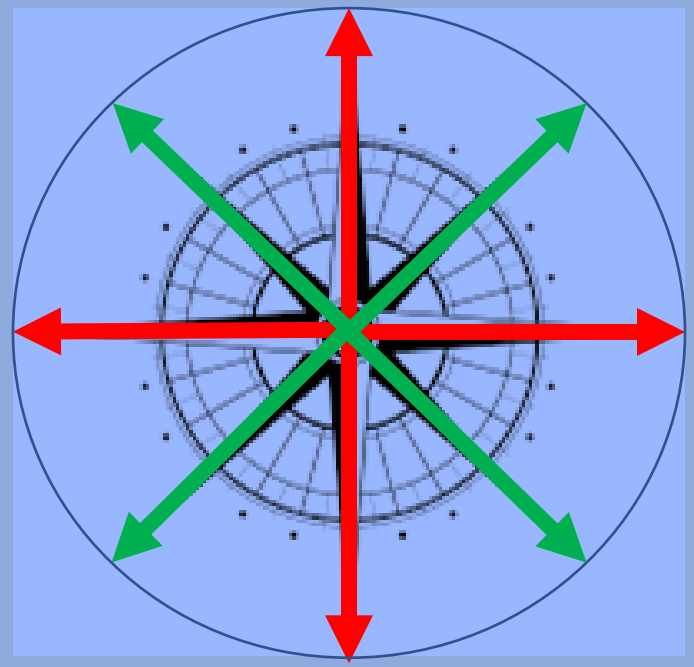


The Compass Rose
Cardinal Points

NORTH
000°
Or
360°

NORTHWEST
315°

NORTHEAST
045°



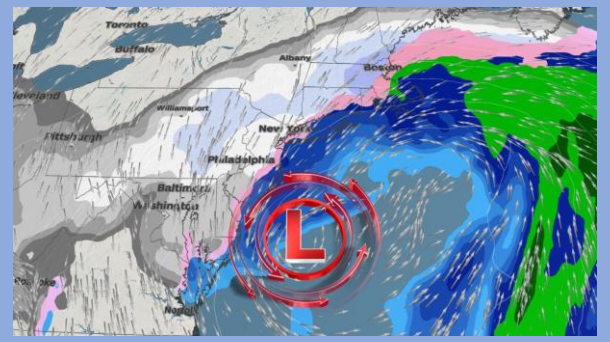
WEST
270°

EAST
090°

SOUTHWEST
225°

SOUTH
180°

SOUTHEAST
135°



A Nor'easter is the name of a storm that delivers NE winds to the East Coast of the USA.

A Sou'wester is an oilskin hat worn by seafarers with a large brim at the back to prevent water going down the neck.

Online Game: Treasure Island Distance and Compass Directions

https://www.matific.com/gb/en-gb/home/maths/episode/treasure-island/


02 :00

Online Game: Treasure Island Distance and Compass Directions

Did you find the buried treasure?

Part 1: Money

https://www.youtube.com/watch?v=YCN2aTlocOw

Money

NOUN [mass noun] a current medium of exchange in the form of coins and banknotes [and also] coins and banknotes collectively.

From the Latin: moneta – ‘mint, money’

Decimal

ADJECTIVE relating to or denoting a system of numbers based on the number ten, tenth parts, and powers of ten.

From the Latin: decimus – ‘tenth’.

Similar words: decade – ‘ten years’; decagon – ‘a ten sided shape’, decathlon – ‘a ten event athletics challenge’

Denominations:

- How many pennies are there in a pound?
- 100
- How many 2p's are there in a pound?
- 50
- How many 5p's are there in a pound?
- 20
- How many 10p's are there in a pound?
- 10
- How many 20p's are there in a pound?
- 5
- How many 50p's are there in a pound?
- 2
- How many £5 notes in a hundred pounds?
- 20
- How many £10 notes in a hundred pounds?
- 10
- How many £20 notes in a hundred pounds?
- 5
- How many £50 notes in a thousand pounds?
- 20

1p 2p 5p 10p

20p 50p £1.00 £2.00

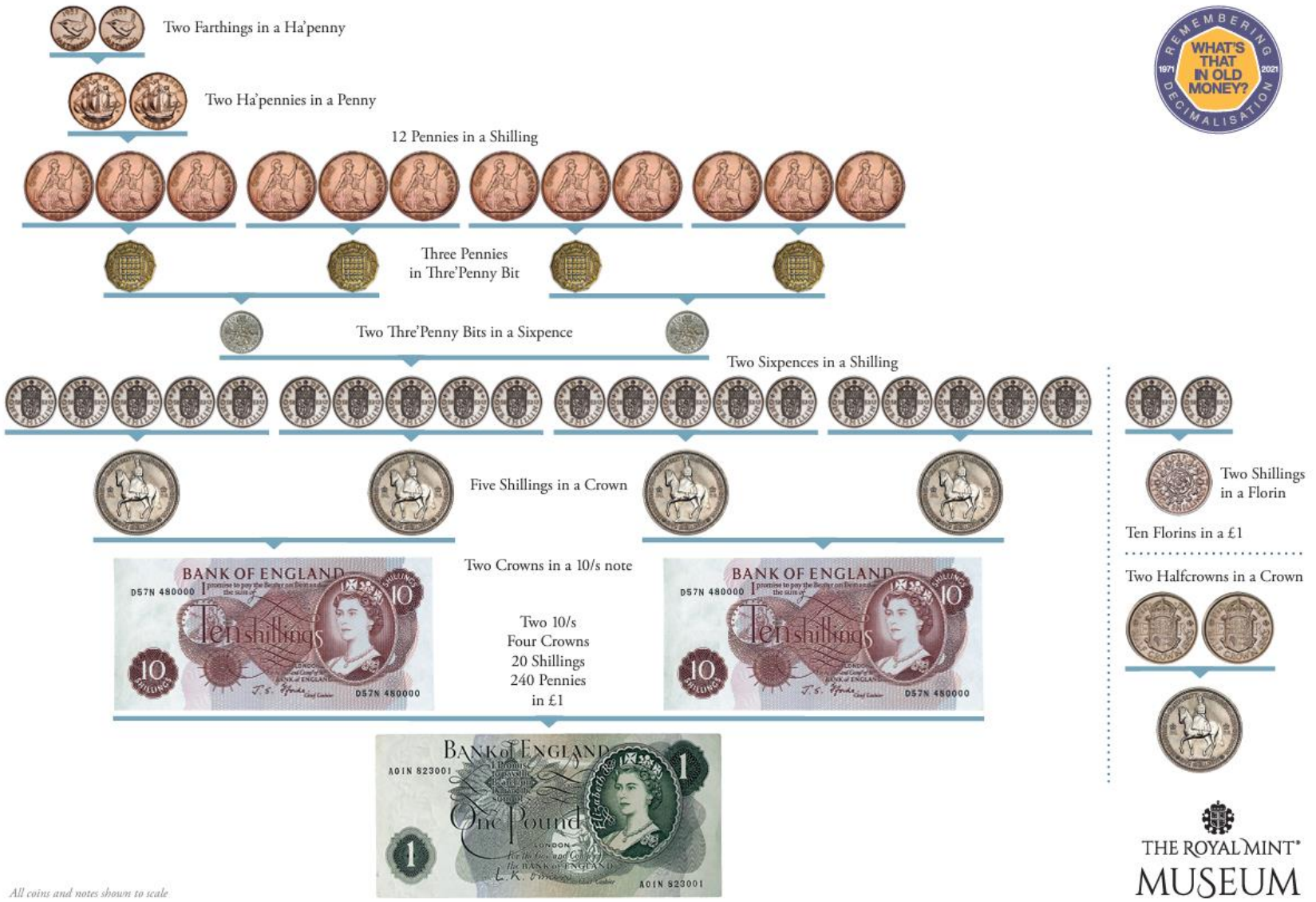
£5.00

£10.00

£20.00

£50.00

Old Money


Two Farthings in a Ha'penny
Two Ha'pennies in a Penny
12 Pennies in a Shilling
Three Pennies in Thre'Penny Bit
Two Thre'Penny Bits in a Sixpence
Two Sixpences in a Shilling
Five Shillings in a Crown
Two Crowns in a 10/s note
Two 10/s
Four Crowns
20 Shillings
240 Pennies
in £1
Two Shillings in a Florin
Ten Florins in a £1
Two Halfcrowns in a Crown
All coins and notes shown to scale
REMEMBERING DECIMALISATION 1971 2021
WHAT'S THAT IN OLD MONEY?
THE ROYAL MINT MUSEUM

UK Money uses a **decimal** system

- There are **100p** (pennies/pence) in every **£1**
- When we quote amounts in money, we always use **2 decimal places** (to account for the above fact).
- If we had **150p**, we would NOT write ***£1.5***, but **£1.50** (the 5 being the first decimal place and the 0 being the second decimal place).
- When we work with money, always be aware of whether you are working in **p** (pennies/pence) or **£** (pounds).

Converting between pounds and pence (CGP EL3 p.30-36)

Pounds and Pence

1) If you get a question on money, the units will probably be pounds (£) or pence (p).

2) You need to be able to switch between using pounds and using pence.
Remember that £1 = 100p.

To go from pounds (£) to pence (p), multiply by 100.

To go from pence (p) to pounds (£), divide by 100.

EXAMPLES:

1) What is £2.60 in pence?

Answer: You're going from pounds to pence, so multiply by 100.

£2.60 × 100 = **260p**

2) What is 70p in pounds?

Answer: You're going from pence to pounds, so divide by 100.

70p ÷ 100 = **£0.70** ← Correct money format is to write two numbers after the decimal point — so write £0.70, not £0.7.

Converting between pounds and pence (CGP EL3 p.30-36)

Practice Questions

1) a) What is £3.84 in pence?

.....

b) What is £1.27 in pence?

.....

2) a) What is 61p in pounds (£)?

.....

b) What is 231p in pounds (£)?

.....

3) Which is more expensive, a pen that costs 65p or one that costs £0.69?

.....

Game: Converting between £ and p

https://wordwall.net/resource/9811386/maths/money-conversion


02 :00

Game: Converting between £ and p

https://wordwall.net/resource/9811386/maths/money-conversion

What was your score?

Use pounds **OR** pence in calculations, not both! (CGP EL3 p.30-36)

1) You may get a question that uses pounds and pence.

2) If you do, you'll need to change the units so that they're all in pounds or all in pence.

EXAMPLE:

Cian buys a DVD online for £7.40. He pays 50p for postage. How much has he spent in total?

1) Change the price of the postage from pence to pounds.

   50p ÷ 100 = £0.50

2) Both prices are now in the same units (£).
   So add together the cost of the DVD and the postage.

   £7.40 + £0.50 = £7.90

So Cian has spent **£7.90**.

See page 32 for adding money using a calculator.

Working with money without a calculator (CGP EL3 p.30-36)

EXAMPLE 1:

Keiko is looking at two TVs in a shop. One costs £259 and the other costs £294. What is the price difference between the two TVs?

Answer: You need to subtract the smaller price from the larger one.

Price difference:

$$\begin{array}{r} {}^{8}\,{}^{14} \\ 2\ 9\ 4 \\ -\ 2\ 5\ 9 \\ \hline 0\ 3\ 5 \end{array}$$

So £294 – 259 = £35

See page 8 for how to subtract without using a calculator.

So there is a **£35** price difference between the two TVs.

See Lesson 3 for addition & subtraction techniques.

Working with money without a calculator (CGP EL3 p.30-36)

EXAMPLE 2:

Keri buys two cakes for £4.
How much would it cost her to buy five cakes?

1) First, you need to work out how much one cake costs.
You know that two cakes cost £4, so you need to divide £4 by 2.

Cost of one cake: £4 ÷ 2 = £2

2) Now multiply the price of one cake by 5.

Cost of five cakes: £2 × 5 = £10

So it would cost Keri **£10** to buy five cakes.

Estimating with rounding (CGP EL3 p.30-36)

You can use rounding to estimate answers to money questions.

EXAMPLE:

Carl is buying supplies on a company credit card.
So far he has spent £15.99, £13.99, and £127.99.
Estimate how much he has spent so far.

1) First round all the numbers to the nearest £.
   £15.99 rounds up to £16.
   £13.99 rounds up to £14.
   £127.99 rounds up to £128.

2) Then add them together: 16 + 14 + 128 = £158

   So Carl has spent about **£158** so far.

You can quite easily find the actual total by working with the leftover pennies. In each of the amounts above we have added on a penny (when rounding up). So, knowing that there are 3 extra pennies, we can simply deduct 3p from our total: £158.00 - £0.03 = £157.97

Game: Working with money in £ and p

https://wordwall.net/resource/32499921/money

Drag the correct sum of money that matches the total.

You may use a calculator.


04:59

Game: Working with money in £ and p

https://wordwall.net/resource/32499921/money

What was your score?

Percentage

NOUN a rate, number or amount in each hundred.

From the Latin: per centum – ‘by a hundred’.

Denoted by the symbol: %

e.g. 25% is 25/100 (or ¼ in the simplest form – divide top and bottom by 25)

Percentages and Money (CGP L1 p.47-49)

Money questions often involve percentages.

For example, you might have to work out how much you save when you get a discount. You could also be asked the new price of something when it is increased or reduced by a certain percentage.

See pages 33-35 for more on working out percentages with or without your calculator.

EXAMPLE 1:

A jacket costs £42. How much money would be saved with a voucher for 15% off?

This question is just asking you to find 15% of £42.

1) Write it down: 15% of £42
   ↓ ↓ ↓
2) Turn it into maths: $\frac{15}{100} \times 42$
3) Type it into your calculator: 15 ÷ 100 × 42 = **£6.30**

If you were asked to find the new amount after the discount, you would have to do £42 − £6.30 = £35.70.

EXAMPLE 2:

Priti goes on a cinema's website. She buys a film ticket for £5.80 and a gift card for £15. She is charged an online admin fee of 5%.
How much does Priti pay in total?

1) Work out how much she pays before the admin fee: £5.80 + £15 = £20.80
2) Calculate 5% of £20.80: $\frac{5}{100} \times 20.80 = 5 \div 100 \times 20.80 = £1.04$
3) Add it on to £20.80: 20.80 + 1.04 = **£21.84**

You'd get the same answer by working out 5% of £5.80 and 5% of £15, then finding the total.

Interest (CGP L1 p.47-49)

1) Interest is money that's added on to the value of something. It's given as a percentage.

2) For example, money saved in a bank account earns interest. Items that you buy on payment plans also cost more over time because interest is charged on them.

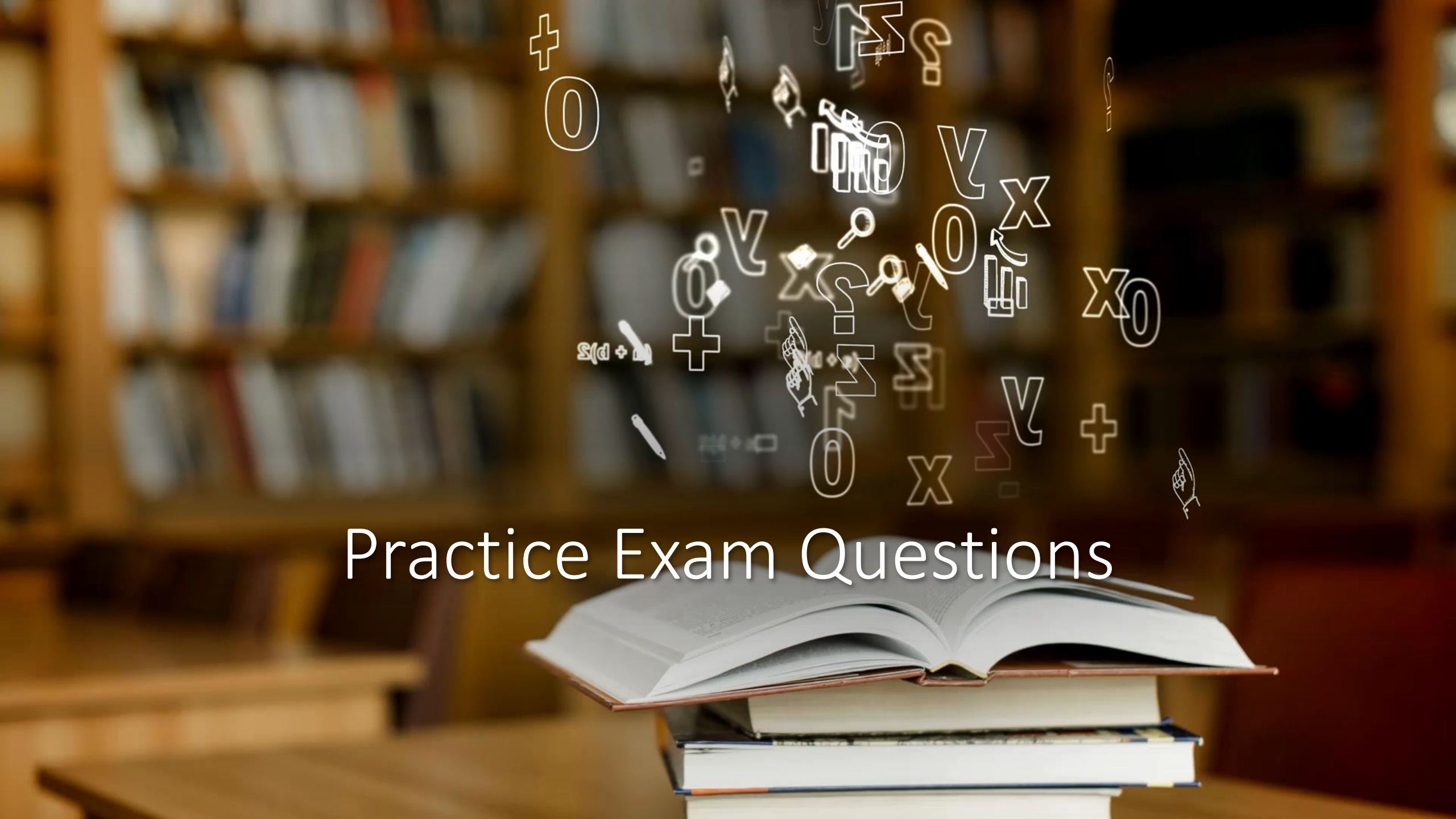
3) When working with interest, calculate the percentage of the amount and then add it to the original amount.

EXAMPLE:

Cara earns 5% interest on her savings. She has £50 in her account. How much money will she have once the interest has been added?

Find 5% of £50: $\frac{5}{100} \times 50 = 5 \div 100 \times 50 = £2.50$

Add this on to £50: $50 + 2.50 = \mathbf{£52.50}$



Practice Exam Questions

Always Read the Question

And always re-read the questions at the end.

EL3 Past Paper Question – Non Calculator

1 (c) Alex will go to college by bus.

The bus ticket is £8.55 per week.

Round £8.55 to the nearest £1

[1 mark]

EL3 Past Paper Question - Calculator

3 (d) Alex buys lunch.

It costs £6.95

He pays with a £10 note.

How much change does he get?

[2 marks]

L1 Past Paper Question – Non Calculator

1 (d) Linda places an online advert for her business.

She pays £0.98 each time someone clicks on her advert.

How much will it cost her if 100 people click on her advert?

[1 mark]

Your answer: £

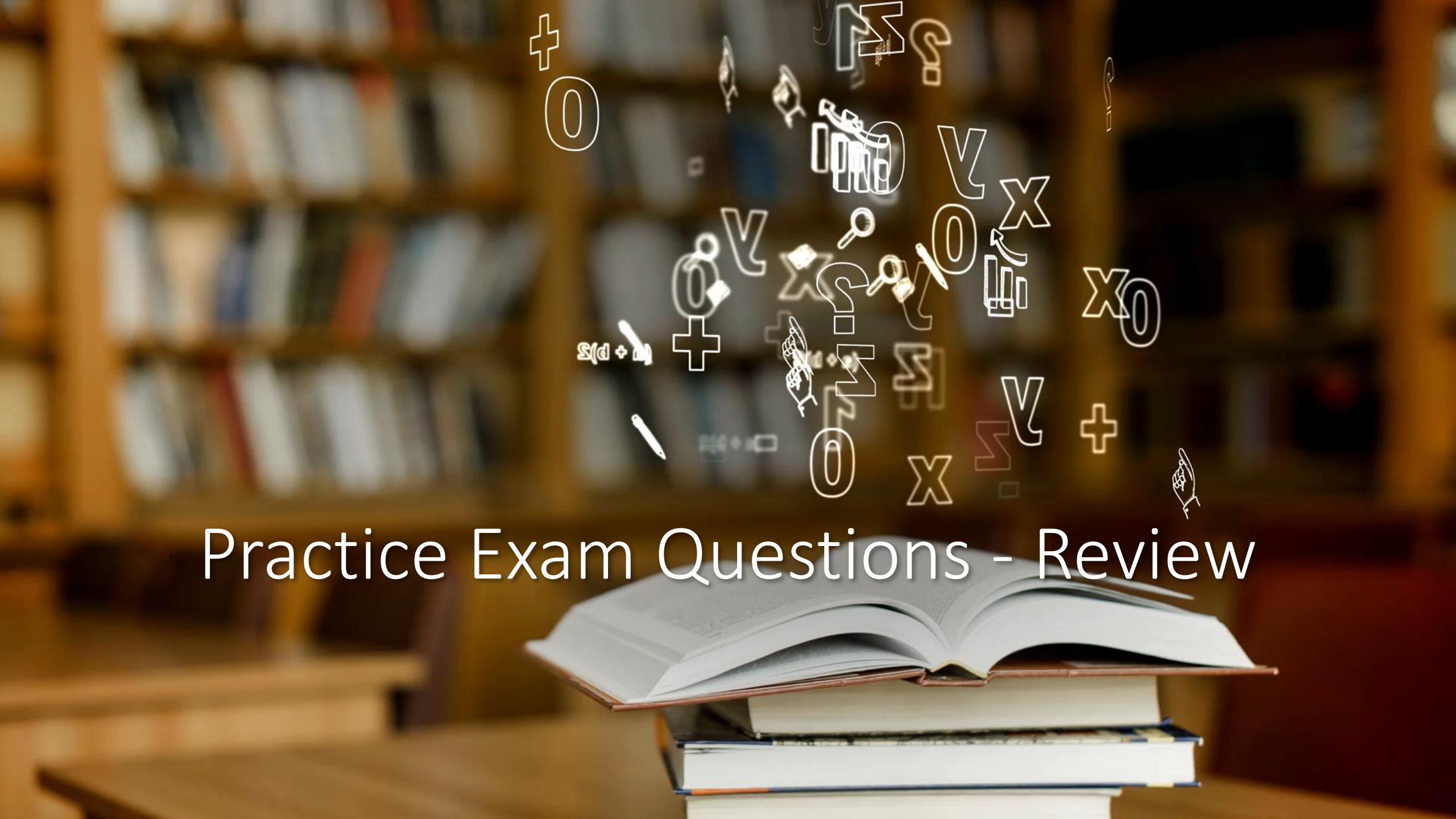
L1 Past Paper Question – Calculator

2 (d) John buys food in preparation for his opening day.

Ingredients	Price per item	Number of items	Total price per ingredient
Cabbage	64p	5	
Pack of carrots	30p	20	
Pack of tomatoes	£1.25	11	
Cucumbers	50p	9	
Pack of onions	£1.00	15	
		Total (£)	

Complete the table to show how much has John spent.

[2 marks]



Practice Exam Questions - Review

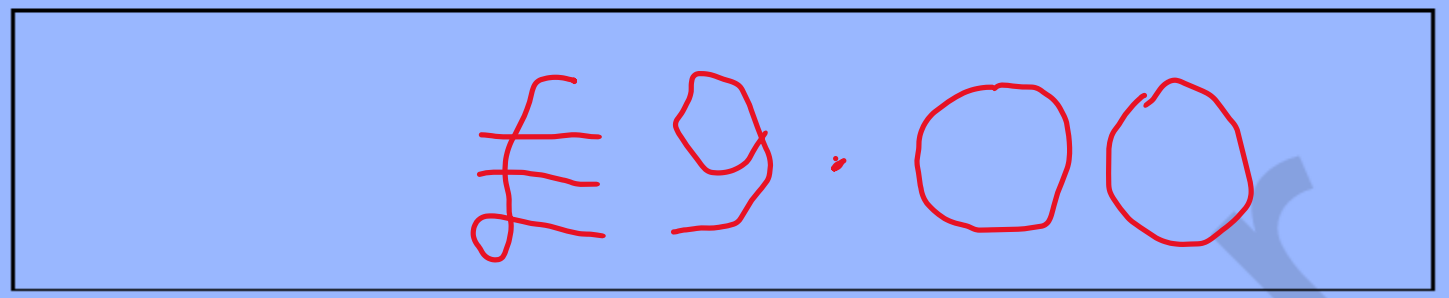
EL3 Past Paper Question – Non Calculator

1 (c) Alex will go to college by bus.

The bus ticket is £8.55 per week.

Round £8.55 to the nearest £1

[1 mark]



Hint: If it's 5 or more, raise the score!

EL3 Past Paper Question - Calculator

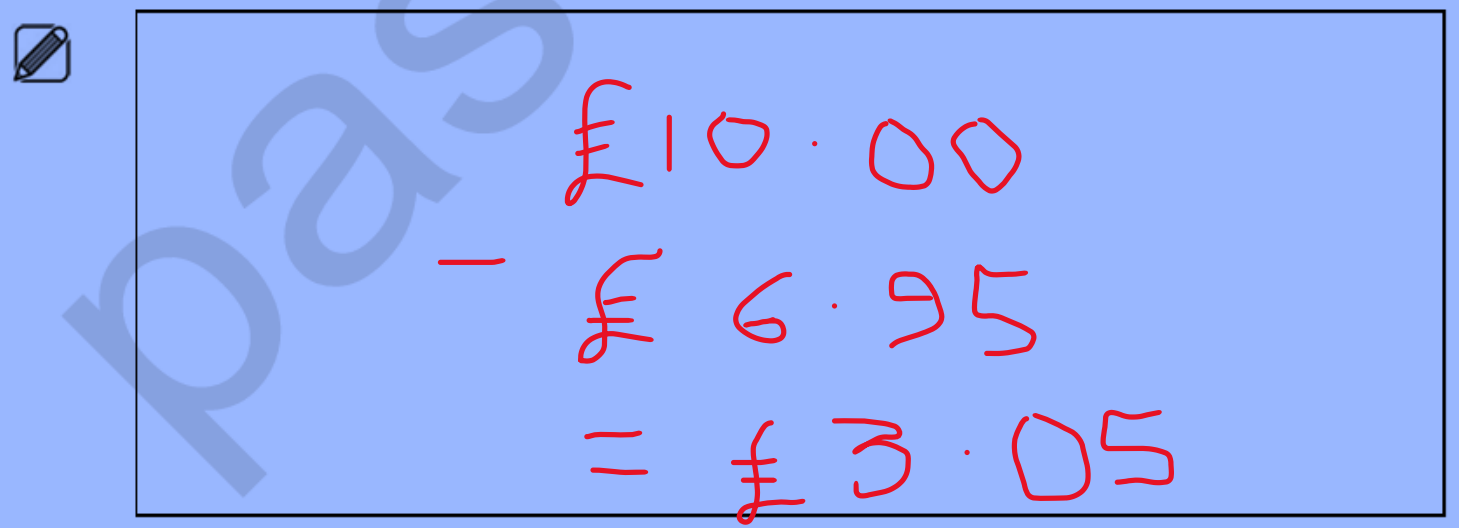
3 (d) Alex buys lunch.

It costs £6.95

He pays with a £10 note.

How much change does he get?

[2 marks]



Another option is to round £6.95 to the nearest whole £ = £7
Then 10 - 7 = £3 and add 5p = £3.05

L1 Past Paper Question – Non Calculator

1 (d) Linda places an online advert for her business.

She pays £0.98 each time someone clicks on her advert.

How much will it cost her if 100 people click on her advert?

[1 mark]

£0·98 × 100

Your answer: £ 98·00

Hint: How many places does the decimal point move?

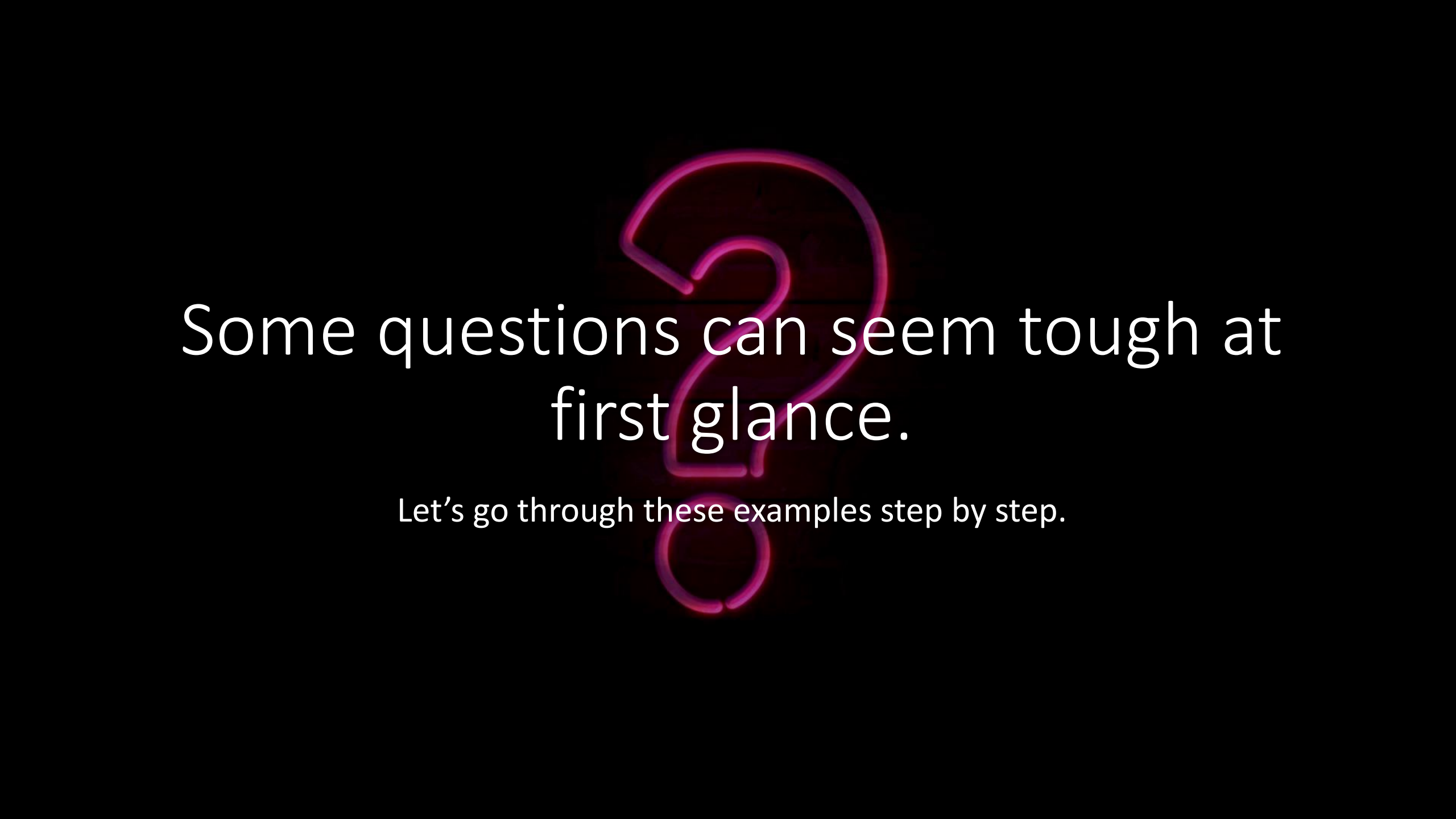
L1 Past Paper Question – Calculator

2 (d) John buys food in preparation for his opening day.

Ingredients	Price per item	Number of items	Total price per ingredient
Cabbage	64p ×	5	320p £3·20
Pack of carrots	30p ×	20	600p £6·00
Pack of tomatoes	£1.25 ×	11	£13·75
Cucumbers	50p ×	9	450p £4·50
Pack of onions	£1.00 ×	15	£15·00
		Total (£)	£42·45

Complete the table to show how much has John spent.

[2 marks]



Some questions can seem tough at first glance.

Let’s go through these examples step by step.

L1 Past Paper – Non Calculator

1 (e) Linda looks at the cost of placing 6 half-page adverts in a local newspaper:

Advert size	Cost	
	3 Adverts	6 Adverts
Full Page	£330	£600
Half Page	£240	£450
Quarter Page	£150	£270

Linda sees these offers:

- **Offer A:** place 3 adverts and get 10% off the cost.
- **Offer B:** place 6 adverts and get $\frac{1}{5}$ off the cost.

She chooses **Offer B**.

How much will she save by choosing **Offer B** instead of **Offer A**?

[4 marks]

This is quite a challenging question…so let's break it down in to steps:

- Linda wants 6 half-page ads.

- If Linda chose offer A, 3 half-page adverts would cost £240, so 6 half-page adverts would cost double.
- 2 x £240 = £480
- This offer has 10% off.
- 10% of £480 is £48.
- The total cost is £480 - £48
- = £432

- Linda has chosen offer B, with 6 half-page adverts costing £450.
- This time she gets 1/5 off.
- We divide £450 by 5 = £90
- The total cost is £450 - £90
- = £360

- By choosing offer B Linda saves (£432 - £360) = £72

L1 Past Paper – Non Calculator

1 (c) The cost of a return train ticket from London to Fort William is £176

Don sees an offer which gives him a 15% discount.

How much money will Don save if he has the discount?

[2 marks]

Your answer: **£**

You can watch the video here: https://www.youtube.com/watch?v=Ay7a1n2JBiA

This video if from the Pass Functional Skills Website: https://passfunctionalskills.co.uk

United Nations Sustainable Development Goals

1 NO POVERTY — END POVERTY IN ALL ITS FORMS EVERYWHERE

IF CURRENT TRENDS CONTINUE,

BY 2030

575 MILLION
PEOPLE WILL STILL BE LIVING IN EXTREME POVERTY

ONLY ONE THIRD
OF COUNTRIES WILL HAVE HALVED THEIR NATIONAL POVERTY LEVELS

IN RESPONSE TO THE COST-OF-LIVING CRISIS,

105 COUNTRIES
ANNOUNCED ALMOST 350 SOCIAL PROTECTION MEASURES IN THE PAST
12 MONTHS
(FEB. 2022 – FEB. 2023)

MANY OF THE
WORLD'S VULNERABLE POPULATION
REMAIN UNCOVERED BY SOCIAL PROTECTION

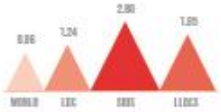
IN LOW-INCOME COUNTRIES, ONLY

OF CHILDREN | OF VULNERABLE PEOPLE | OF OLDER PERSONS

RECEIVED SOCIAL PROTECTION CASH BENEFITS
(2020)

LDCs, SIDS AND LLDCs
FACE **HIGHER VULNERABILITY**
TO DISASTERS

AVERAGE ANNUAL NUMBER OF DEATHS OR MISSING PERSONS PER 100,000 POPULATION
(2012-2021)



WORLDWIDE, COUNTRIES HAVE **INCREASED GOVERNMENT SPENDING** ON **ESSENTIAL SERVICES** (EDUCATION, HEALTH AND SOCIAL PROTECTION) SINCE 2015

Over 1 Billion people (in our world of 8 Billion) live on less than a dollar a day (£0.79).

Could you live on less than a dollar a day?

How much money **in pounds** would you have for a week?

£5.53

https://www.dollaraday.global/


https://www.youtube.com/watch?v=Ze72rpWp_Dg

Private Study

Entry Level 3 Students: Read through pages 30 - 36 of your CGP textbook, answering all questions as you go.

Level 1 Students: Read through pages 47 - 49 of your CGP textbook, answering all questions as you go.

Level 2 Students: Read through pages 52 - 61 of your CGP textbook, answering all questions as you go.

Don’t worry if you don’t finish, just do as much as you can.

If you need help, ask one of the staff.

My Skills Forward

- If you have completed all questions in your textbook, let's now look at NCFE My Skills Forward.
- Grab a laptop and visit the following link:

https://www.myskillsforward.co.uk

- Your login details are:

  Username: Your full name with no spaces

  Password: Letmein1

- Starts at the beginning of Section 1: Number and work through the exercises.
- Please ask for help where needed and let me know if there are areas in this section that you would like to revise.

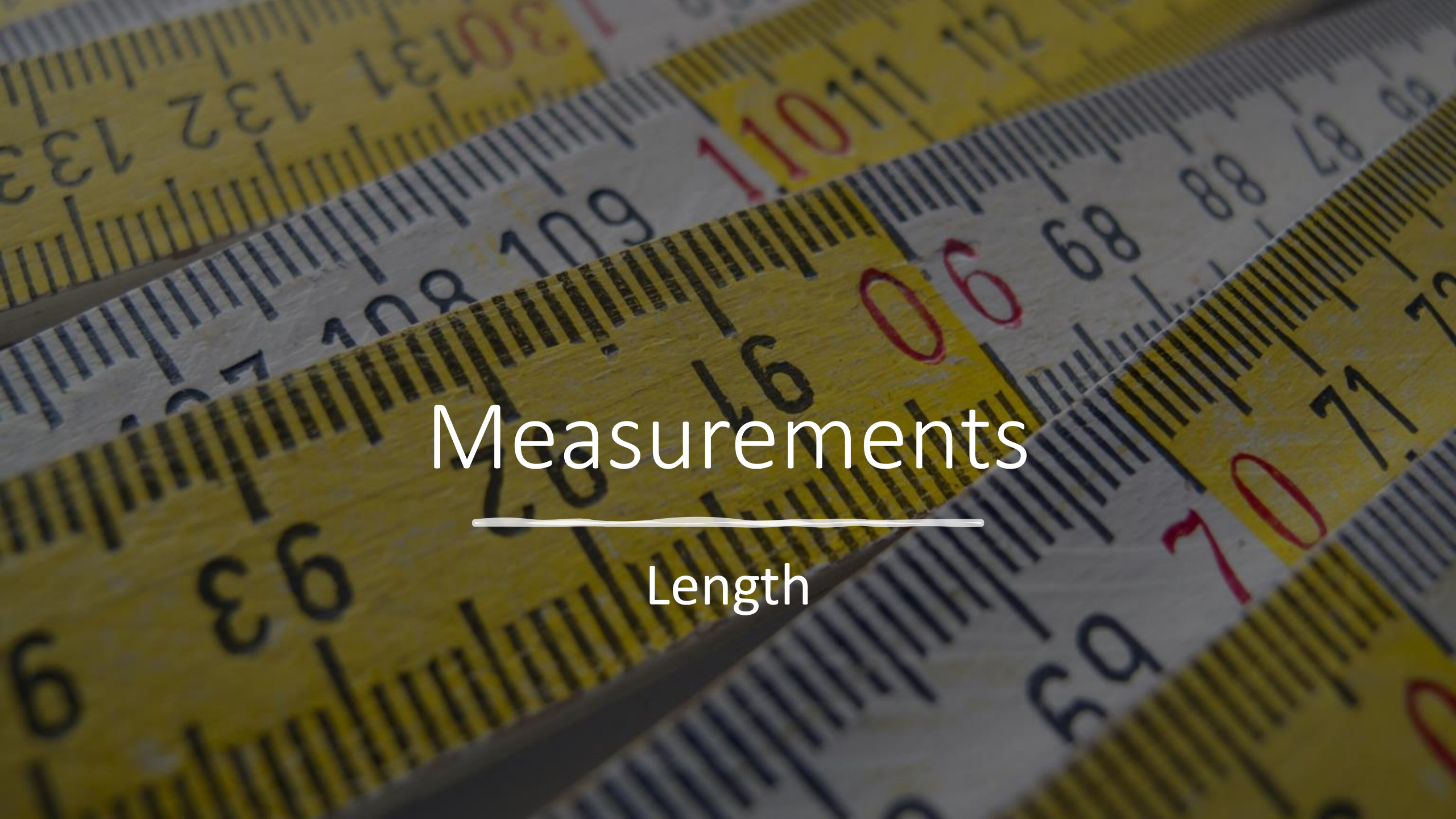
End of Part One


11

Part Two

Take 5 minutes for yourself…

Section 2: Measure, Shape & Space
Part 2: Length and Angles



Measurements

Length

Length

NOUN [mass noun] the measurement or extent of something from end to end; the greater of two or the greatest of three dimensions of an object.

From the Old English (Germanic origin) ‘lengthu’

Measurement

NOUN [mass noun] the action of measuring something.

[count noun] the size, length, or amount of something, as established by measuring.

[count noun] a unit or system of measuring.

How many different measurements you can think of (not just length)?

Try to think of the units: e.g. kg, feet, degrees etc.

For the majority of measurements you will encounter…we use the **metric system.**

But you may also see imperial measurements such as feet and inches.

In this case, just continue to work with the units you are given.

Video: Introduction to the Metric System

https://www.youtube.com/watch?v=ZNX-a-5jGeM

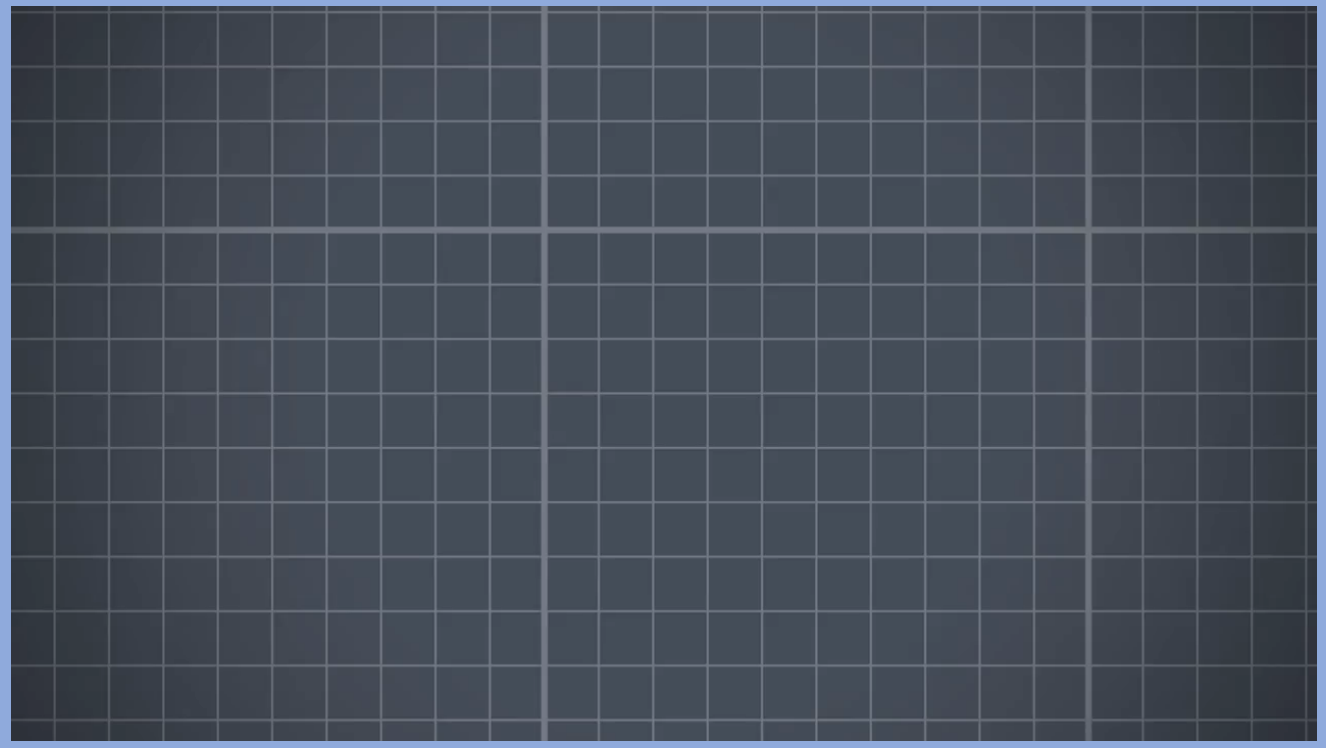
Note: In the US, they spell the word **metre** as meter. In the UK, a meter is a device for measuring something (e.g. an electric meter). The correct spelling of the unit of length is **metre**.

Prefixes for S.I. Units – e.g. milli, centi, kilo

https://www.youtube.com/watch?v=QEQDNskG72M&t=4s

Prefiks	Symbol	Multiplying factor
yotta	Y	$1\,000\,000\,000\,000\,000\,000\,000\,000 = 10^{24}$
zetta	Z	$1\,000\,000\,000\,000\,000\,000\,000 = 10^{21}$
exa	E	$1\,000\,000\,000\,000\,000\,000 = 10^{18}$
peta	P	$1\,000\,000\,000\,000\,000 = 10^{15}$
tera	T	$1\,000\,000\,000\,000 = 10^{12}$
giga	G	$1\,000\,000\,000 = 10^{9}$
mega	M	$1\,000\,000 = 10^{6}$
kilo	k	$1\,000 = 10^{3}$
hecto	h	$100 = 10^{2}$
deka	da	$10 = 10^{1}$
deci	d	$0{,}1 = 10^{-1}$
centi	c	$0{,}01 = 10^{-2}$
milli	m	$0{,}001 = 10^{-3}$
mikro	μ	$0{,}000\,001 = 10^{-6}$
nano	n	$0{,}000\,000\,001 = 10^{-9}$
piko	p	$0{,}000\,000\,000\,001 = 10^{-12}$
femto	f	$0{,}000\,000\,000\,000\,001 = 10^{-15}$
atto	a	$0{,}000\,000\,000\,000\,000\,001 = 10^{-18}$
zepto	z	$0{,}000\,000\,000\,000\,000\,000\,001 = 10^{-21}$
yocto	y	$0{,}000\,000\,000\,000\,000\,000\,000\,001 = 10^{-24}$

1 unit



The video shows the sizes of different objects in the range of piko metres to Tera metres.

For Maths at our Level, we only need to be aware of milli, centi and kilo.

You may have heard of smaller or larger measurements e.g. your mobile phone's memory is measured in Gb (Gigabytes) or even Tb (Terabytes).

Game: Measuring Length

https://www.funbrain.com/games/measure-it

Select ‘cm’ and ‘Hard’

If this is too easy select ‘Inches’ and ‘Superbrain’


02 :00

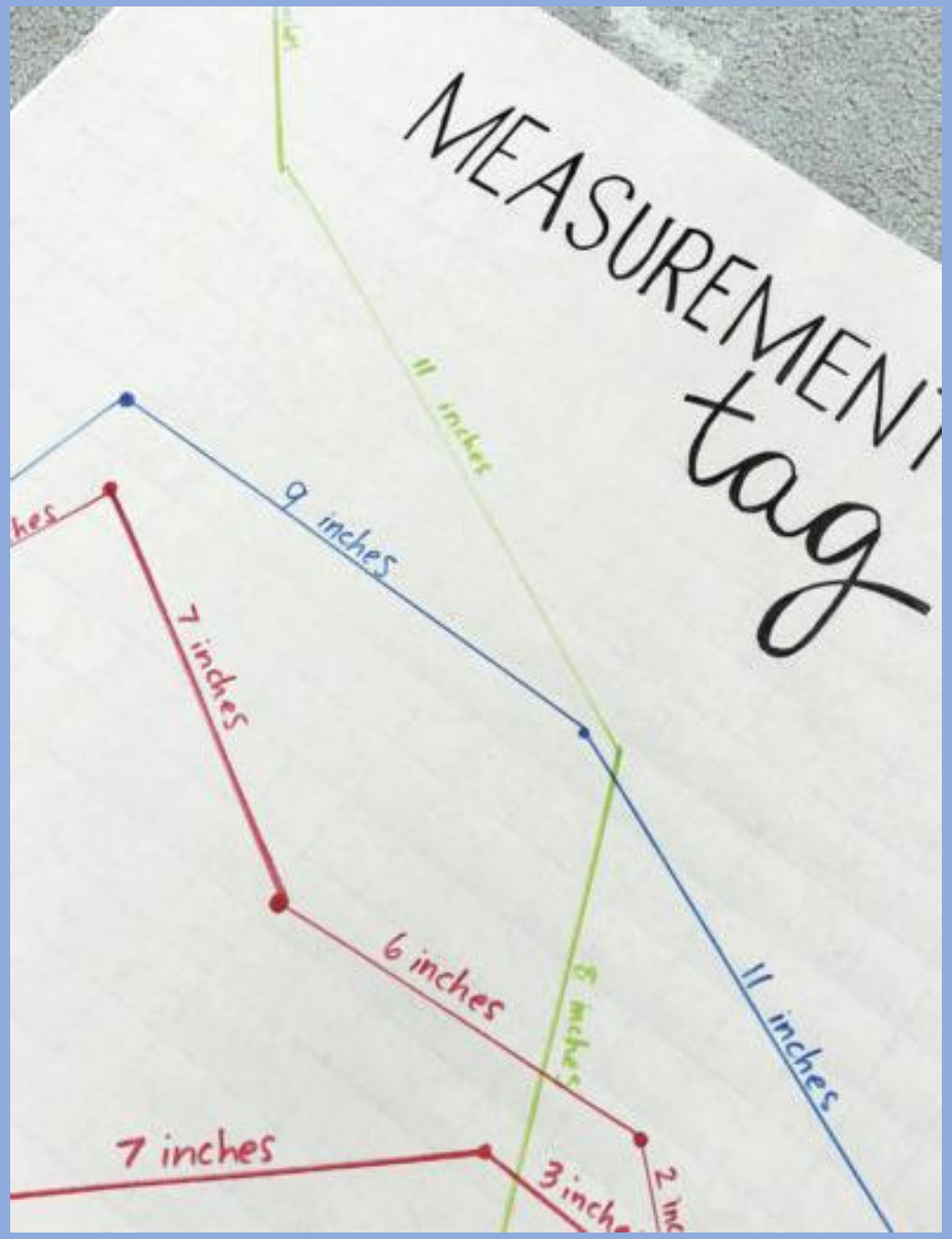
Game: Measuring Length

https://www.funbrain.com/games/measure-it

What was your score?

Activity: Measurement Tag

- Find yourself a partner to work with.
- Get a piece of A4 paper and two different coloured pens.
- One of you is “IT”
- Each draw a circle about 1cm across (draw around a 5p coin or similar) at opposite ends of the page.
- The person who is “IT” goes first and has to guess how far away their opponent’s circle is. (You can guess in cm or inches)
- Once they have guessed the distance, they can then use a ruler to see if they tag the other person.
- If the line is too short or too long, they miss.
- Wherever the line finishes is where the “IT” person goes from next – draw a new circle and cross out the old one.
- Each time, the person who is not “IT” has to move their circle to a new position (putting a cross through the old one).
- Once “IT” the roles swap.
- You can only use the ruler when drawing your attacking line.

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Length (CGP EL3 p.48-50)

Length is How Long Something is

You might have to answer questions where you have to do calculations with lengths.

EXAMPLE 1:

Colette has a 5 ft length of fabric. She buys another 0.5 ft long piece.
What is the total length of fabric Colette has now?

To find the total length, add together the lengths of the two pieces:

Total length = 5 ft + 0.5 ft = 5.5 ft

So Colette has **5.5 ft** of fabric.

EXAMPLE 2:

Matthew needs to paint a line halfway along a football pitch.
The pitch is 100 m long. Where should Matthew paint the line?

To find out where halfway along the pitch is, divide the length of the pitch by 2:

Halfway along the pitch = 100 m ÷ 2 = 50 m

So Matthew needs to paint the line at **50 m**.

Length – Changing Units (CGP EL3 p.48-50)

Changing from One Unit to Another

1) If a number has units after it, then you can only add or take away another number with the same units.
2) So to answer some questions, you might need to change from one unit to another.
3) You can use the tables on pages 45 and 46 to help you change between different units.

This table will help you change between units of length:

Length
1 cm = 10 mm
1 m = 100 cm
1 km = 1000 m

You won't get tables like this in your test, so you'll need to learn them.

EXAMPLE:

Calvin's ladder is 2 m long. He extends it by 110 cm.
How long is the ladder now?

You need to add 110 cm to 2 m, but you can't because the units are different.

You first need to change one of the lengths so that they both have the same units.

You can see from the table that 1 m = 100 cm.
So to change m into cm you multiply by 100:

Length
1 cm = 10 mm
1 m = 100 cm
1 km = 1000 m

$$2 \times 100 = 200 \text{ cm}$$

Now the units are all the same (cm), you can add the two lengths together:

200 cm + 110 cm = 310 cm.

So Calvin's ladder is **310 cm** long when it's extended.

Private Study

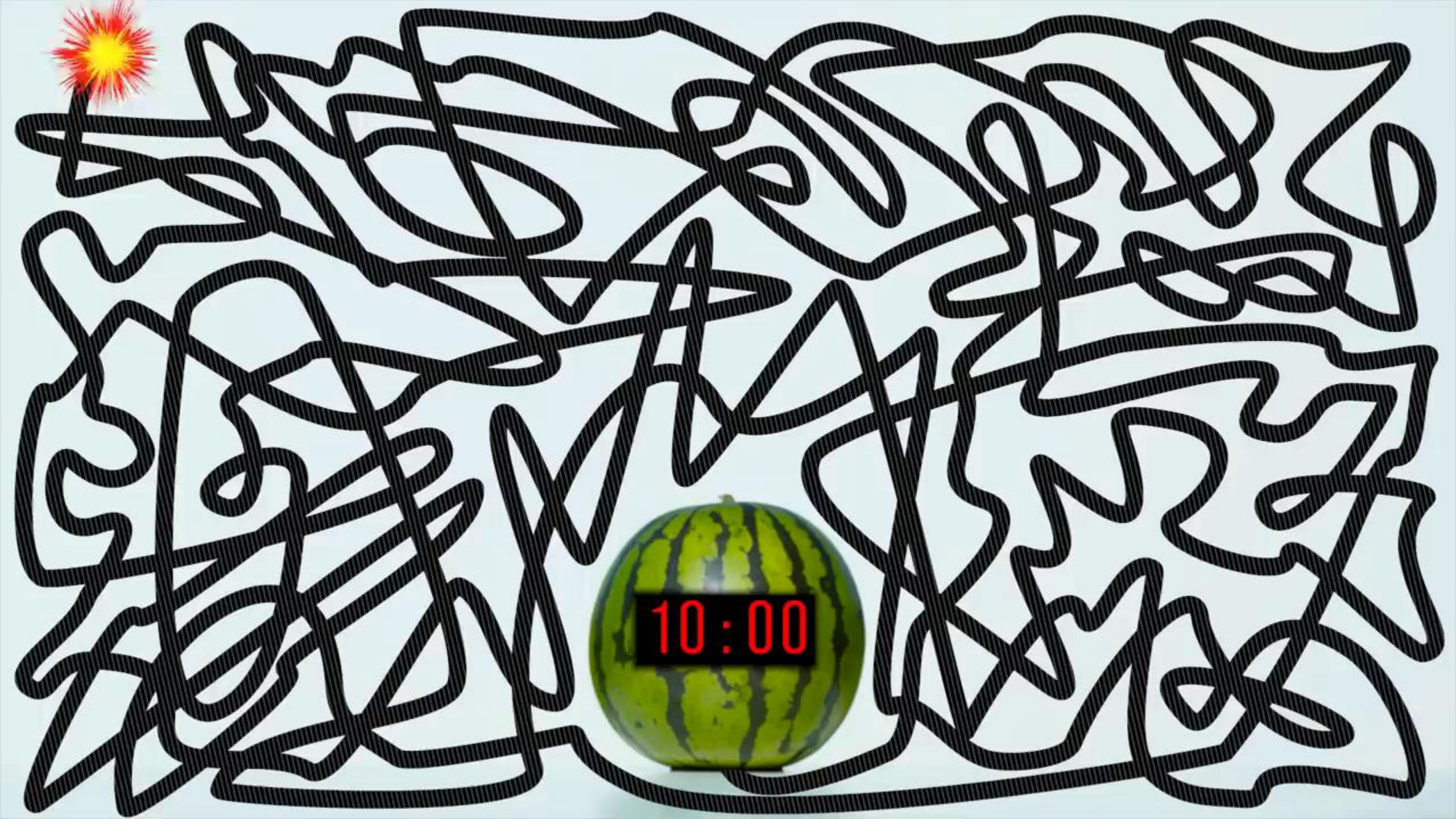
Entry Level 3 Students: Read through pages 48 - 50 of your CGP textbook, answering all questions as you go.

Level 1 Students: Read through pages 50 - 51 of your CGP textbook, answering all questions as you go.

Level 2 Students: Read through pages 74 - 76 of your CGP textbook, answering all questions as you go.

Don’t worry if you don’t finish, just do as much as you can.

If you need help, ask one of the staff.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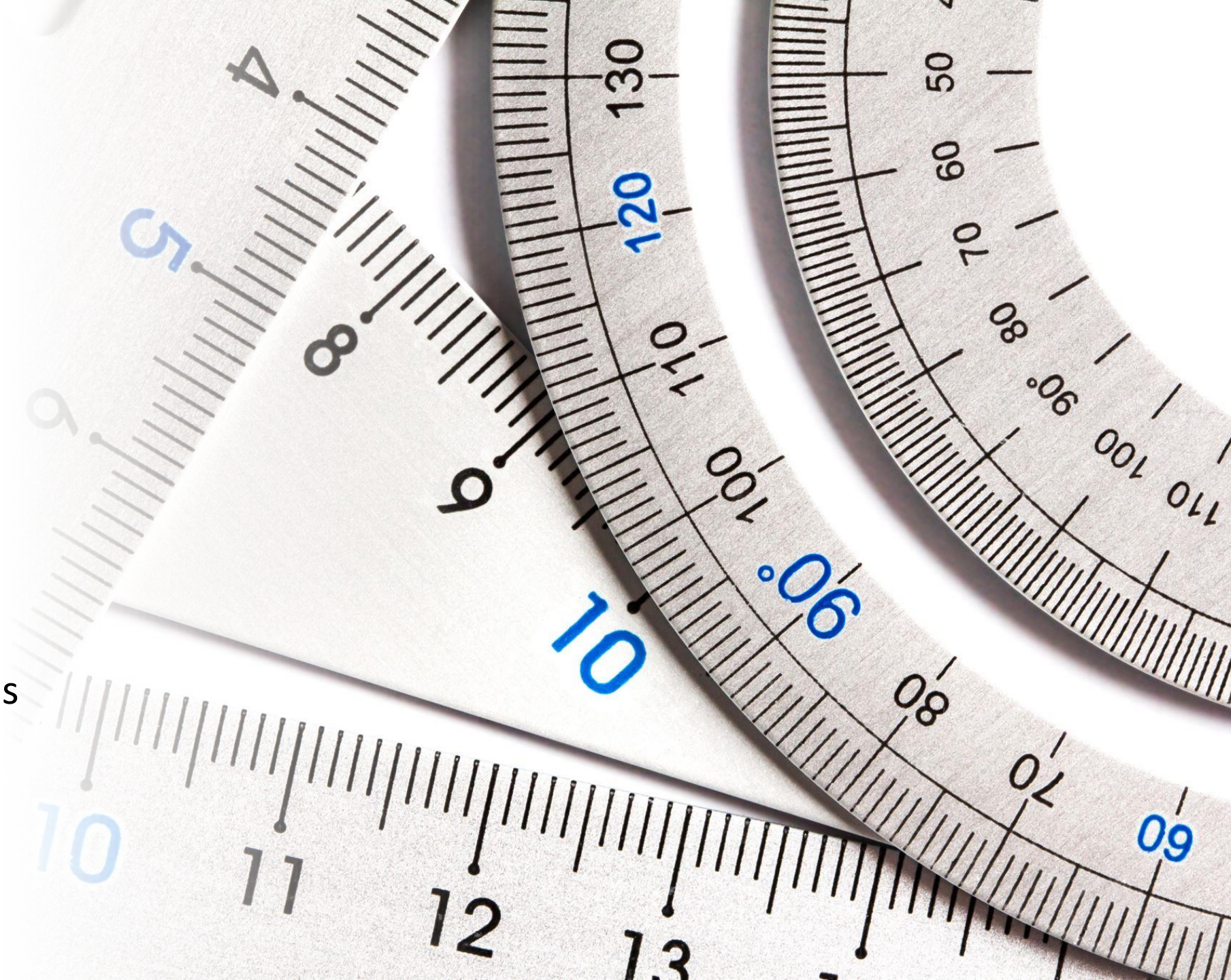
Angles

Measuring in degrees



Angle

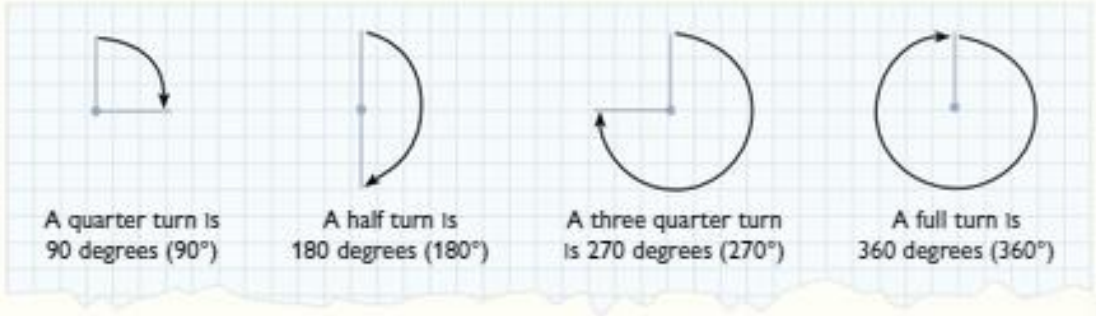
NOUN the space (usually measured in degrees) between two intersecting lines or surfaces at the point where they meet.

From the Latin ‘angulus’ - corner

Angles (CGP L1 p.76-77)

Angles Measure How Far Something Has Turned

1) Angles tell you how far something has turned from a fixed point.
The bigger the angle, the bigger the turn. Angles are measured in degrees (°).



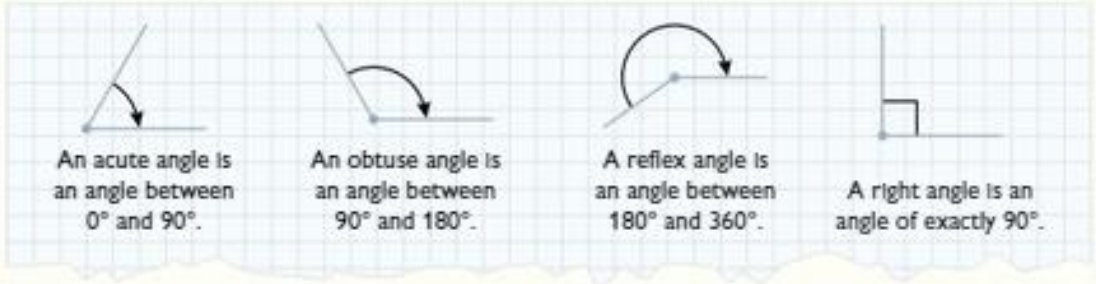
A quarter turn is 90 degrees (90°)

A half turn is 180 degrees (180°)

A three quarter turn is 270 degrees (270°)

A full turn is 360 degrees (360°)

2) There are special names for angles depending on their size.



An acute angle is an angle between 0° and 90°.

An obtuse angle is an angle between 90° and 180°.

A reflex angle is an angle between 180° and 360°.

A right angle is an angle of exactly 90°.

3) Angles can be measured clockwise or anticlockwise.

Clockwise

Anticlockwise

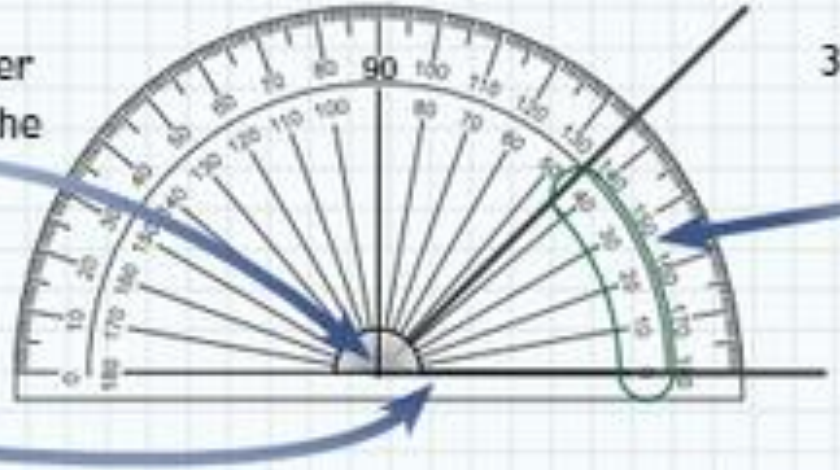
Angles (CGP L1 p.76-77)

You Can Measure Angles Between Lines

You can use a protractor to measure angles of up to 180°.

To measure the angle between two lines...

1) Put the cross on the protractor over the point where the lines meet.
2) Line up the bottom line on the protractor with one line of the angle.



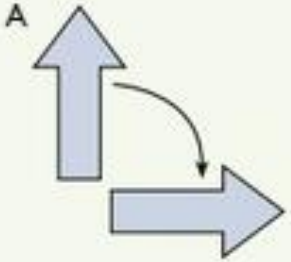
3) Then just read the scale. Use the scale that has 0 on the line of your angle. This angle measures 45°.

Angles (CGP L1 p.76-77)

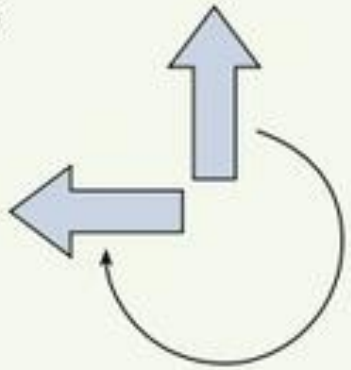
Practice Questions

1) In the diagrams below, three arrows have been turned.
Write the letter of the arrow next to the number of degrees it has turned.

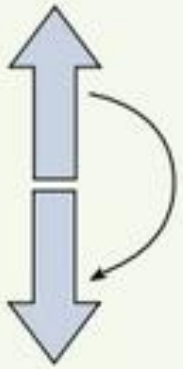
A



B



C



90° = ...

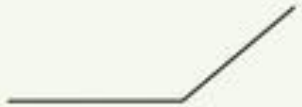
180° = ...

270° = ...

2) Measure the angles between the lines below using a protractor. Write down the size of the angle (in degrees) and say whether it is acute, obtuse, reflex or a right angle.

a)

b)



c)

.....

.....

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.....

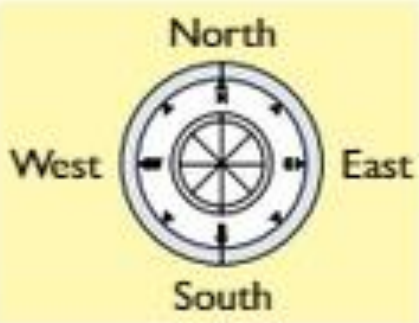
.....

.....

Bearings (CGP L1 p.76-77)

Bearings Measure the Angle of One Point From Another

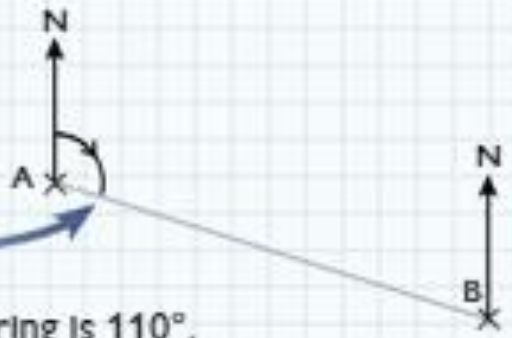
1) A bearing is a direction given as an angle in degrees.
2) Bearings are always measured clockwise from a North line.
3) They are always given as three digits.
   For example, you write 025° instead of 25°
   and 061° instead of 61°.



To find the bearing of B from A, draw a straight line connecting A and B.

Then measure the clockwise angle at A from North to the line.

The angle measures 110°, so the bearing is 110°.




REI
co-op
BACKPACKING
HOW TO USE A COMPASS

Game: Alien Angles

https://www.mathplayground.com/alienangles.html


04:59

Game: Alien Angles

https://www.mathplayground.com/alienangles.html

How many aliens did you rescue?

Private Study

Entry Level 3 Students: Read through pages 62 of your CGP textbook, answering all questions as you go.

Level 1 Students: Read through pages 76 - 78 of your CGP textbook, answering all questions as you go.

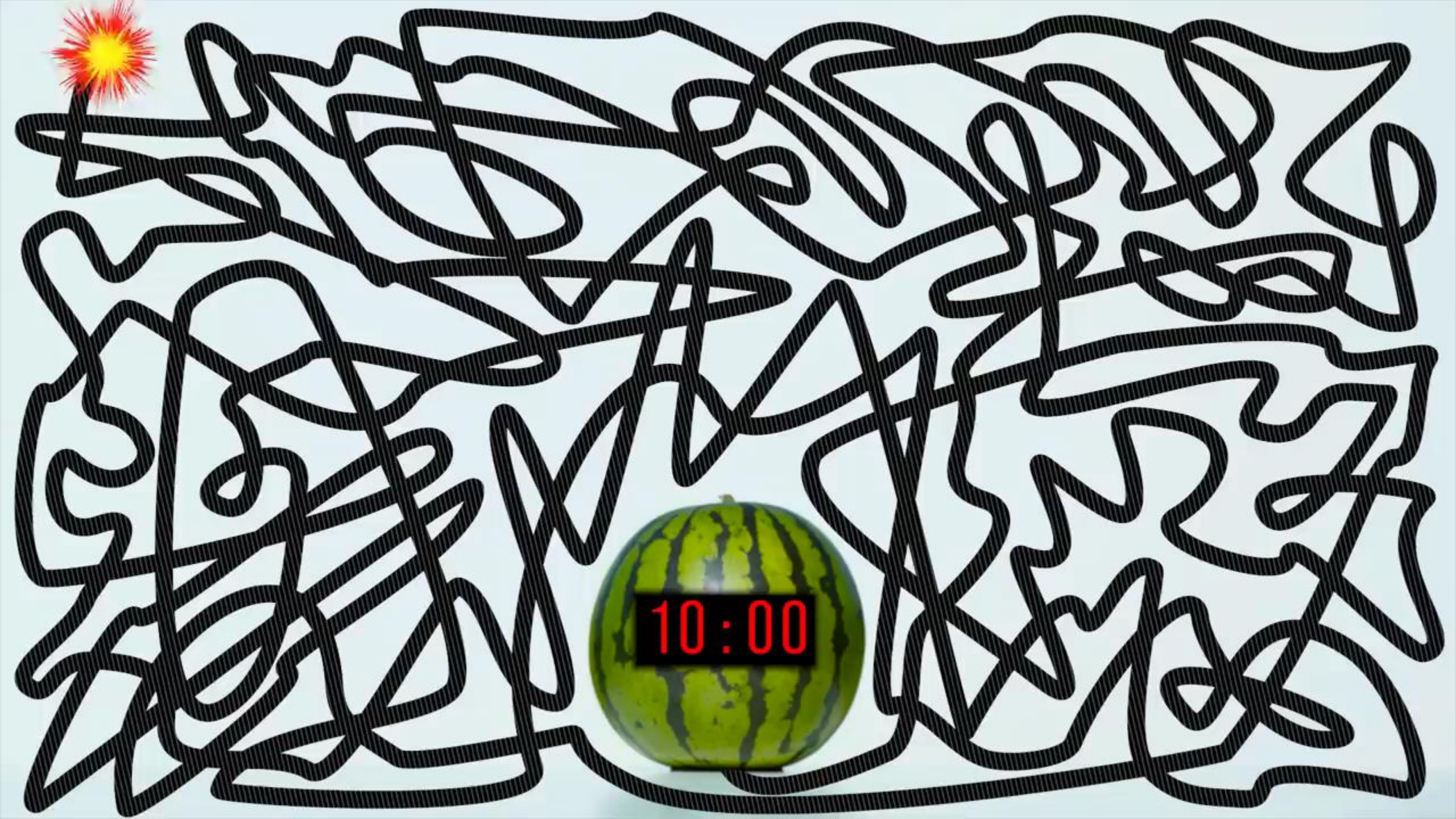
Level 2 Students: Read through pages 103 - 105 of your CGP textbook, answering all questions as you go.

Don’t worry if you don’t finish, just do as much as you can.

If you need help, ask one of the staff.

Revision Q and A:

- Some of us may have missed lessons for a variety of reasons.
- If there are gaps in your CGP textbook for Unit 1: Number. Please work through these and ask staff for help if needed.
- Start at the beginning of Unit 1 and work forward completing gaps.
- If you are concerned that you are behind, don't forget that all of the resources are available online.
- Click on: www.reachoutcf.com/maths-resources
- Here you will find all of the lesson PowerPoint presentations. Please note the videos will not play onscreen but you can click on the links.


10 : 00

My Skills Forward

- If you have completed all questions in your textbook, let's now look at NCFE My Skills Forward.
- Grab a laptop and visit the following link:

https://www.myskillsforward.co.uk

- Your login details are:

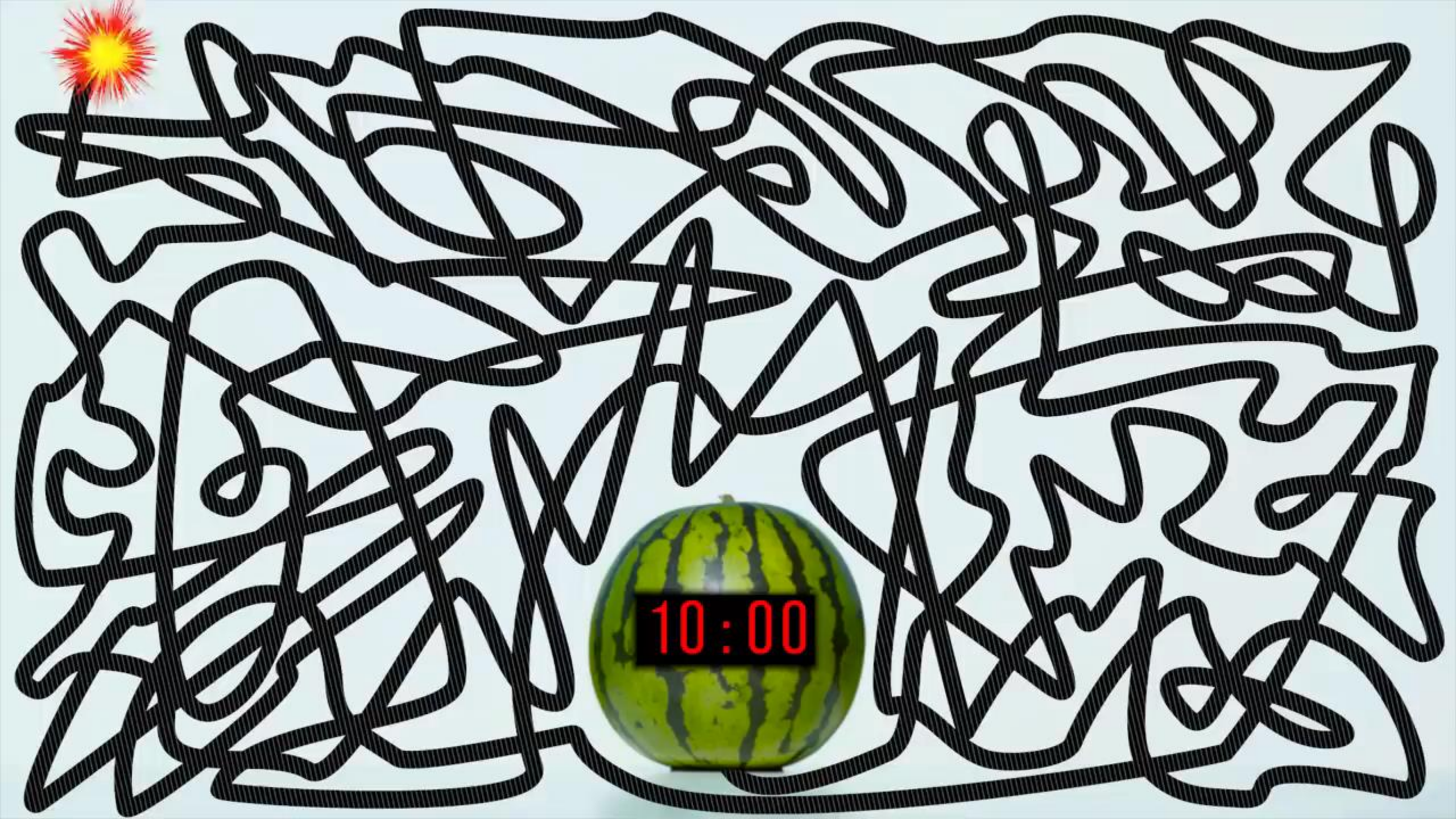
  Username: Your full name with no spaces

  Password: Letmein1

- Starts at the beginning of Section 1: Number and work through the exercises.
- Please ask for help where needed and let me know if there are areas in this section that you would like to revise.


02 :00


04:59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Your partner is Evil!

We all know that our partners are the product of time and money (particularly when dating!). Mathematically, a product is another way of saying multiplication.

Partner = Time x Money

We all know that Time is Money. Time = Money

Partner = Money x Money = $Money^2$

You may have heard that Money is the root of all Evil. Money = $\sqrt{Evil}$

Therefore: **Partner = $(\sqrt{Evil})^2$ = Evil**