# Level 1 Numeracy – Using Money, Time and Measures in Real Life Context

# 1 of 17 - Welcome

Welcome to this session on using money, time and measures in real-life contexts. In this session we will cover the following areas:

* Distinguish between different types of coins and notes
* Work out money calculations
* Use time efficiently
* Perform measure calculations involving length, weight and capacity
* Apply this knowledge in real life situations

# 2 of 17 – Money

Money consists of metal coins and paper notes.

Money serves as a means of exchange in order to buy things or provide services.

Money management is a key part of life. It can define the lifestyle of one person and influence the most important aspects of life such as health issues, career choices, family planning, housing and many more.

The official currency of the United Kingdom is the pound sterling, symbolised as £. The pound is made up of 100 pence (p).

# 3 of 17 – Coins and notes

The coins in the United Kingdom are:

* 1 pence
* 2 pence
* 5 pence
* 10 pence
* 20 pence
* 50 pence
* 1 pound
* 2 pound

The notes in the United Kingdom are:

* 5 pounds
* 10 pounds
* 20 pounds
* 50 pounds

# 4 of 17 – Money

£1 consists of 100p. In order to work out money calculations, it is important to always convert the amounts to either pounds or pence.

Examples:

1. **Converting pounds to pence**

£1 = 100p

£50 = (50 multiplied by 100)p = 5,000p

£3.50 = (3.50 multiplied by 100)p = 350p

1. **Converting pence to pounds**

100p = £1

284p = £(284 divided by 100) = £2.84

3,600p = £(3,600 divided by 100) = £36

# 5 of 17 – Question 1

Sam has a £10 note. He goes to the supermarket and buys milk for 79 pence, bread for 90 pence and one portion of salmon for £2.70. He also wants to buy a cake but is not sure which one he can afford. Which cake can Sam buy?

* A gateau for £8
* A cheesecake for £7
* A sticky toffee pudding for £6
* An apple pie for £5

Answer:

Convert pence to pounds:

79 pence = £0.79

90 pence = £0.90

Expenses: £(0.79 plus 0.90 plus 2.70) = £4.39

Money to spend on a cake = £10 minus £4.39 = £5.61

He can buy an apple pie.

# 6 of 17 – Time

Punctuality is one of the most important qualities a person can have. Being on time is sought after in both professional and personal situations.

Time awareness begins with knowing how to read the time.

There are two types of clocks used:

* The analogue clock
* The digital clock

The difference between the two types is that the analogue clock calculates time in two 12 hour intervals (midnight to noon and noon to midnight), while the digital clock presents time in a 24 hour format

(0:00-23:59).

# 7 of 17 – Time

Time is measured in hours (h), minutes (min) and seconds (s).

The relationship between them is:

* 1 hour consists of 60 minutes.
* 1 minute consists of 60 seconds.

Therefore, 1 hour consists of 3,600 seconds (60 × 60 = 3,600).

Additionally:

* 1 hour comprises of 60 minutes.
* Three quarters of an hour comprises of 45 minutes.
* Half an hour comprises of 30 minutes.
* A quarter of an hour comprises of 15 minutes.

# 8 of 17 – Time

When you are working out time calculations, the first step is to convert all given times into either hours, minutes or seconds.

Converting hours to minutes

1h = 60min

3h = (60 multiplied by 3) min = 180min

4h and 20min = (60 multiplied by 4)min plus 20min = 240min plus 20min = 260min

Converting minutes to seconds

1min = 60s

7min = (7 multiplied by 60)s = 420s

# 9 of 17 – Question 2

Christina has a job interview at 10:30. She will be ready to leave her house at 9:45. She can either take the bus or drive.

The bus stop is 5 minutes away from her house, the bus is expected at 9:55 and will travel for 20min. From the bus stop she will have to walk another 10 minutes to get to the interview.

Alternatively, she can drive for 20 minutes to the closest car park and walk another 20 minutes to the interview.

What should Christina do?

* Drive
* Take the bus
* Either way, she will arrive at the same time

Answer:

If Christina takes the bus:

She will arrive at the bus stop at: 9h 45min + 5min = 9h 50min so she has enough time to get to the bus stop. The bus will arrive at the next bus stop at:

9h 55min plus 20min = 9h 55min plus (5min plus 15min) = 9h (55min plus 5min) plus 15min = 10h 15min

Then she will have to walk another 10 minutes to get to the workplace so:

10h 15min plus 10min = 10:25a.m.

If Christina drives:

She will leave from her home at 9h 45min and drive to the closest park which takes 20 minutes so:

9h 45min plus 20 min = 10:05 a.m.

Then she will have to walk another 20 minutes, so she will arrive at 10:25a.m.

Either way, she will arrive at the same time.

# 10 of 17 – Measures

Measures are expressing the quantity of something in units of measurement.

Measures most commonly refer to:

* Length
* Weight
* Capacity

There are currently two systems used in the United Kingdom:

* The metric system or global International System of Units (SI)
* The imperial system

In this session, the units of measurement will be the metric system.

# 11 of 17 – Length

The metric unit of measurement for length is the metre (m).

Depending on the length being measured it could be more appropriate to use kilometres (km) or centimetres (cm) instead of metres.

What is the relationship between these units of measurement?

100cm = 1m.

1,000m = 1km.

# 12 of 17 – Weight

The unit of measurement for weight is the kilogram (kg).

Depending on the weight being measured, it could be more appropriate to use grams (g).

What is the relationship between these units of measurement?

1,000g = 1kg.

# 13 of 17 – Capacity

The unit of measurement for capacity is the litre (l).

Depending on the volume being measured, it could be more appropriate to use millilitres (ml) instead of litres.

What is the relationship between these units of measurement?

1,000ml = 1l.

# 14 of 17 – Question 3

George hurt his back and the doctor said that he should not carry more than 2.5kg when shopping. He can spend £5 on any of the following items:

* Chicken - £4.50, 1.8kg
* Baby potatoes - £1.75, 750g
* Broccoli - £0.45, 300g
* Carrots - £0.45, 1kg

Which of the following products can he buy?

Select all possible combinations.

1. Chicken and baby potatoes
2. Chicken and broccoli
3. Chicken and carrots
4. Baby potatoes, broccoli and carrots

Answer: He should chose 2 and 4.

1. Chicken and potatoes

* Weight: 1.80kg plus 750g = 1.80kg plus 0.75kg = 2.55kg
* Cost: £4.50 plus £1.75 = £6.25
* Heavier and more expensive

2. Chicken and broccoli

* Weight: 1.80kg plus 300g= 1.80kg plus 0.30kg = 2.10kg
* Cost: £4.50 plus £0.45 = £4.95
* George can both afford and carry this

3. Chicken and carrots

* Weight: 1.80kg plus 1kg = 2.80kg
* Cost: £4.50 plus £0.45 = £4.95
* George can afford it but he cannot carry it

4. Potatoes, broccoli and carrots

* Weight: 750g plus 300g plus 1kg = 0.75kg plus 0.30kg plus1kg = 2.05kg
* Cost: £1.75 plus £0.45 plus £0.45 = £2.65
* He can both afford and carry this

# 15 of 17 – Question 4

A pool is filled at a rate of six litres of water per minute. If the capacity of the swimming pool is 3,600 litres and Preston starts filling it up at 11:30a.m, what time will he finish filling the swimming pool?

* 13:00
* 15:10
* 19:45
* 21:30

Answer: 21:30

6l are used in 1min.

3,600l are used in: (3,600l multiplied by 1min) divided by 6l = 600min.

1 hour consists of 60min.

(600min multiplied by 1h) divided by 60min = 10h.

11:30 = 11h 30min.

11h 30min plus 10h = 21h 30min.

# 16 of 17 – Question 5

Lexie needs to buy ribbon for a project. How much ribbon will she need to buy to create the following shape? If the ribbon costs £1.50 for every 20m, how much will this project cost?

How much ribbon will she need to buy?

How much will this project cost?

Answer:

Ribbon needed:

800cm = (800 divided by 100)m = 8m

10m plus 8m plus 10m plus 8m = 36m

Cost:

20m of ribbon costs £1.50

36m cost (36m multiplied by £1.50) divided by 20m = £(54 divided by 20)= £2.70

# 17 of 17 – End

Well done, you have completed this session on using money, time and measures in a real-life context.

You should now be able to:

* Distinguish between different types of coins and notes
* Work out money calculations
* Use time efficiently
* Perform measure calculations involving length, weight and capacity
* Apply this knowledge in real life situations

If you are unsure or have any questions about any of these topics, make a note and speak to your tutor for more help.