## Build your skills for managing your money

## Buy now, pay later? - Part 1

If you want to buy something but do not have the money to buy the item outright, what can you do? The information and activities in this task will help you think about calculations that might help you to decide whether to buy now and pay later.

This task has three parts.

## Part 1

This is where you will find information and activities to help you become more confident when calculating paying for items by instalments. This part will help you to consider the implications of buying now and paying later.

N1/E3.9, N2/E3.3
N2/E3.4
Skills leading to
N2/L1.9
$B(e) 2, B(g) 1$
futor notes

## Part 2

Suggestions of other free resources to help you to practise your skills can be found here.

## Part 3

In Part 3 you can try out your skills on some practical money problems, and check your progress on some typical questions from the Entry 3 National Certificates. Part 3 also contains the answers to all the activities in Parts 1-3.


Thinking about the total cost of an item when you pay by instalments

Paying by instalments means a number of regular payments.
Sometimes you may have an option to pay in this way and this cost is usually spread over a fixed time, like a year. Let's think about how to work out what the total cost of an item would be in this case.


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## Activity 1

When you buy an item by paying in regular instalments, it is useful to work out the total amount you will be paying for the item.

Information that will be important in working out this total amount is:

- the payment amount - how much do you pay each time?
- the frequency of the payments - how often do you pay?
- the length of the payment schedule or contract - this is sometimes called the 'term' of the agreement.


## Key facts

Remember that there are:

- 12 months in a year
- 52 weeks in a year.


## Example 1



Rana has bought a piece of furniture.

She is paying for this by a payment of $£ 50$ each month for a year.
How much is this in total?

She makes the payments monthly so she will be making 12 payments in a year:

$$
£ 50 \times 12 \text { months }=£ 600
$$

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## Example 2

You may need to think of the calculation in two steps, e.g. working out the cost over one year first, then using this to work out the cost over a longer period.

Jake is paying for new electrical equipment.
He pays $£ 30$ a month for 5 years.
How much does he pay in total?

$$
£ 30 \times 12 \text { months } \quad \times 5 \text { (years) }=£ 1800
$$

(the cost over 1 year) (the cost for 5 years)


Fill in the second column of the table below to show what calculation you would need to make in order to work out the total amount in each case.

Note: You do not need to work out the answer to the calculations. We will be working out answers later on in this task. However, it is important to be able to work out what calculation you may need to make.

Tip: Pay attention to whether the payment is made monthly or weekly.
The first one has been done for you as an example.

| Payment amount, frequency and length | Calculation to work out total amount |
| :--- | :--- |
| Monthly payment of $£ 12.00$ for 1 year | $£ 12 \times 12$ months |
| Weekly payment of $£ 5.00$ for 1 year |  |
| Monthly payment of $£ 25.00$ for 3 years |  |
| Monthly payment of $£ 30.00$ for 2 years |  |
| Weekly payment of $£ 6.00$ for 2 years |  |
| Weekly payment of $£ 10$ for 26 weeks |  |
| Monthly payment of $£ 40$ for 5 years |  |
| Monthly payment of $£ 125$ for 10 years |  |

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## Activity 2

When you pay by instalments you may be charged an extra amount for choosing this way of paying. For example, you may need to pay an 'administrative fee'.
(This is sometimes called an 'admin fee' and it covers the extra costs the company will spend on processing more than one payment.)

How will you add this into your calculation of the total amount of the item's cost?

## Example 1

Ben has bought electrical equipment.
He makes monthly payments of $£ 30$ for 5 years (as above).
He also pays an administrative fee of $£ 25$.

This time the total cost is made up of two parts:
the repayments towards the cost of the item $\quad+\quad$ the admin fee.

## Cost of item over the 'full term' Admin fees

i.e. total amount of repayments
$£ 30 \times 12$ months $\times 5$ (years) $+£ 25$
$£ 1800$ + £25 =£1825

## Example 2

If the admin fee is paid per year, we can still use this same approach, but include this in our calculation as well.

Clare is buying a new kitchen.
She makes monthly payments of $£ 120$ for 5 years,
but also pays an administrative fee of $£ 20$ per year.

Again, the total cost is made up of two parts:
the repayments towards the cost of the item $\quad+\quad$ the admin fee.

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## Cost of item over the 'full term'

i.e. total amount of repayments
$£ 120 \times \mathbf{1 2}$ months $\times 5$ years $\quad \mathbf{£ 2 0}$ (fee per yr) $\times 5$ years
$£ 7200$

## Admin fees

$$
=£ 7300
$$

In the National Certificate you may not be able to use a calculator. However, in everyday life we frequently use one to help us work out finances. Where you see this symbol to the right side of an activity, you may use a calculator if you wish.
[inT
Calculator




Work out the cost of paying for these items by filling in the last two columns.

The first one has been done for you as an example.


Calculator

| $x$ | 7 | 8 | 9 |
| :--- | :--- | :--- | :--- |
| -7 | 4 | 5 | 6 |



| Payment for item | Admin fee | Cost of item | + | Admin fee |
| :--- | :--- | :---: | :---: | :---: |
| Monthly payment of $£ 12.00$ for 1 year | $£ 25$ | $12 \times 12$ | + | $£ 25$ |
| Monthly payment of $£ 5.00$ for 1 year | $£ 10$ |  |  |  |
| Monthly payment of $£ 25.00$ for 3 years | $£ 12$ |  |  |  |
| Monthly payment of $£ 30.00$ for 2 years | $£ 6$ per year |  |  |  |
| Monthly payment of $£ 6.00$ for 2 years | $£ 10$ per year |  |  |  |
| Monthly payment of $£ 40$ for 5 years | $£ 10$ per year |  |  |  |

## Build your skills for managing your money

Thinking about the cost of each instalment to pay for an item over a fixed period of time

## Activity 3

When you know the total cost of an item you want to buy, you might want to work out how much each instalment will be if you pay in a particular number of instalments.

## Example

Winston is buying a new digital radio costing $£ 240$.
He chooses to pay in 10 instalments.
How much will he pay per instalment?
$£ 240 \div 10 \div £ 24$ per instalment


Fill in the second column of the table below to show what calculation you would need to make in order to work out the cost of one instalment in each case. Then work out the cost of each instalment.

The first one has been done for you as an example.

Calculator
( 78.8

| -4 | 5 | 6 |
| :--- | :--- | :--- | :--- |


| $\%$ | 1 |
| :--- | :--- |


| Total payment | Number of <br> instalments | Calculation to work out <br> cost of one instalment | Cost of each <br> instalment |
| :---: | :---: | :---: | :--- |
| $£ 240$ | 6 | $£ 240 \div 6$ instalments |  |
| $£ 500$ | 5 |  |  |
| $£ 600$ | 12 |  |  |
| $£ 750$ | 5 |  |  |
| $£ 960$ | 12 |  |  |
| $£ 1000$ | 10 |  |  |
| $£ 1200$ | 10 |  |  |

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## Activity 4

Again, you may need to pay an admin fee (or management charge).
If you are paying by instalment, the administrative fee will usually be divided equally between the number of instalments.

## Example

Lou buys a dress costing $£ 200$ and is paying in 10 instalments.
There is an admin fee of $£ 20$.
How much will she pay per instalment?
The total amount she needs to pay is:
the cost of the item + the admin fee:

$$
£ 200+£ 20=£ 220
$$

The amount she will pay per instalment is:
this total amount divided by the number of instalments:

$$
£ 220 \div 10 \text { instalments }=£ 22
$$



Work out the cost per instalment in each of these cases by filling in the last two columns.

The first one has been done for you as an example.

| Payment amount | Admin fee | Total amount to pay | Amount per instalment |
| :--- | :---: | :---: | :---: |
| $£ 200$ over 10 instalments | $£ 20$ | $£ 200+£ 20=£ 220$ | $£ 220 \div 10 \quad=22$ |
| $£ 300$ over 6 instalments | $£ 24$ |  |  |
| $£ 500$ over 10 instalments | $£ 10$ |  |  |
| $£ 360$ over 6 instalments | $£ 12$ |  |  |
| $£ 450$ over 9 instalments | $£ 45$ |  |  |
| $£ 720$ over 6 instalments | $£ 30$ |  |  |
| $£ 720$ over 8 instalments | $£ 24$ |  |  |

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## Activity 5

Sometimes the admin fee is expressed as a percentage of the amount you are paying.

## Example 1

Nuri buys a camera costing £200.
She is paying over 10 months and paying an admin fee of $5 \%$.
Let's think about what this means:
$5 \%$ means you pay $£ 5$ for every $£ 100$ you are spending.
$£ 200$ is 2 lots of $£ 100$.
So, Nuri will pay: $£ 5($ for the first $£ 100)+£ 5($ for the second $£ 100)=£ 10$ admin fee

## Example 2

Raj is paying for a television costing $£ 400$ over 10 months.
Also, he needs to pay an admin fee of 5\%.
5\% means you pay £5 for every £100 you are spending.
$£ 400$ is 4 lots of $£ 100$.
So, Raj will pay: $£ 5$ (for the 1st $£ 100)+£ 5$ (for the 2nd £100) $+£ 5$ (for the 3rd £100) $+£ 5$ (for the 4th £100), i.e. 4 lots of $£ 5=4 \times £ 5=£ 20$ admin fee.


Work out how much the following admin fees (shown as a percentage) will be in pounds.

The first one has been done for you as an example.

| Amount of <br> item | Admin fee <br> (as a \%) | Amount of admin fee (in pounds) |
| :---: | :---: | :---: |
| $£ 400$ | $5 \%$ | $£ 5$ for every $£ 100 ;$ <br> $£ 400$ is 4 lots of $£ 100$ |
| $£ 300$ | $5 \%$ |  |
| $£ 600$ | $10 \%$ |  |
| $£ 500$ | $2 \%$ |  |
| $£ 500$ | $8 \%$ |  |
| $£ 400$ | $12 \%$ |  |

## Build your skills for managing your money

## Activity 6

If you want to work out a percentage amount, you can do this on a calculator using the '\%' button (if your calculator has one).

## Example 1

To work out the admin fee for the second example above, using a calculator:

## Cost of television: £400

Enter into your calculator:
400 $\square$ $\times$ 5 $\square$

## $5 \%$ admin fee

This gives the answer:
So, a £20 admin fee.

## Example 2

A coat costing £125
Enter into your calculator: 125 $\square$ $\times$ 5 $\square$
\%
Remember: You don't need to press $\square$
This gives the answer:
6.25 Take care to notice the decimal point So, a $£ 6.25$ admin fee.

## Example 3

A piece of furniture costing $£ 120$
Enter into your calculator:
120 $\square$ $\times$ 6 $\square$

5\% admin fee

## Build your skills for managing your money

Dealing with money often involves working with percentages so, although you won't need to use them to take a National Certificate in maths at Entry 3, you will be using them here and you can use a calculator to help you.

However, it is a useful skill to have when you are thinking about your finances, because in real life we come across percentages quite frequently, especially in situations involving money. Also in real life we often do use a calculator to help us with our calculations.

If you would like to try working out examples like this using a calculator, try the activity below. If you do not want to do this, move straight on to the next section.


Use a calculator to work out how much the following admin fees shown (as a percentage) will be (in pounds).


The first two have been done for you as examples.

| Amount of item | Admin fee (as a \%) | Amount of admin fee (in pounds) |
| :--- | :--- | :--- |
| $£ 120$ | $6 \%$ | $£ 7.20$ |
| $£ 125$ | $5 \%$ | $£ 6.25$ |
| $£ 300$ | $5 \%$ |  |
| $£ 250$ | $10 \%$ |  |
| $£ 500$ | $8 \%$ |  |
| $£ 125$ | $8 \%$ |  |
| $£ 700$ | $12 \%$ |  |
| $£ 125$ | $10 \%$ |  |
| $£ 250$ | $5 \%$ |  |
| $£ 325$ | $5 \%$ |  |
| $£ 460$ | $12 \%$ |  |

## Build your skills for managing your money

## Working out interest on money borrowed

Using the same approach as the one shown in activity 6, you can work out the amount of interest you will pay on money you might want to borrow.

## Example

You want to borrow £500. The interest rate is 5\% (per year).
How much interest will you pay in a year?
Using a calculator:
500 $\square$ 5 $\square$ Remember: You don't need to press $\square$
This gives the answer:
So, £25 interest in a year.


## A point to think about:

Sometimes you see deals that offer you ' $0 \%$ interest' on items you want to buy.
Let's think about what this means:
$0 \%$ means £0 for every £100 you borrow.
So, however much you borrow you won't pay any interest.
This sounds quite attractive - and no more expensive than paying for the item up front!
But . . . are there any disadvantages of buying things on 0\% interest deals?
Think about:

- Why do companies offer deals like this if they don't make money from them in interest payments?
- What might you need to be careful about if you opt for a 0\% interest deal?

Now print out Part 2 of this task to find suggestions of other free resources you might want to use to practise the skills covered.

In Part 3 you will find opportunities to try out these skills by applying them to two example situations. You will also find some 'Progress Check' sample test questions.

