

# Functional Skillbuilders Maths



Our bestselling range of graded numeracy teaching materials equips students with the necessary knowledge, skills and understanding to use and apply mathematics in everyday life. *Functional Skillbuilders* ensures your students develop number, measure, shape and space and data handling skills in a meaningful way and helps them to transfer these skills to other areas of learning.

Written by a Functional English Chief Examiner, the workplace contexts are key to this series' success. *Functional Skillbuilders* give your students the essential skills needed to pass the Functional Skills assessments and Functional Skills aspects of GCSEs.

## WHY FUNCTIONAL SKILLBUILDERS MATHS?

Written by a chief examiner, this series ensures peace of mind with complete coverage of the Functional Maths standards. *Functional Skillbuilders* use real-life scenarios to develop Functional Maths skills so that your students gain confidence and familiarity with the requirements.

*Functional Skillbuilders* covers Entry Level 1 through to Levels 1 and 2 to suit a wide range of needs. Teaching notes save you time and provide you with the support you need to deliver these brand new qualifications.

The workplace contexts in the series ensure activities are real, they are also suitable for preparation for working life. *Functional Skillbuilders* workplaces are a supermarket, hotel and a factory.

## WHAT TEACHERS SAY

*"Axis Education's range of numeracy teaching materials is absolutely superb. They have been instrumental in helping our pupils see Maths in different ways and across the curriculum. And they are fun to use."*

Chris Hulme  
Numeracy across the Curriculum  
Co-ordinator, Dene Community  
School, Peterlee, County Durham.

*"This series is essential for introduction into entry level learning as well as onward progression. The worksheets are easy to follow and well-laid out. There are numerous examples on familiar topic areas that are relevant to everyday life."*

Susanna Gould  
Course Tutor, Community Learning,  
Grimsby Institute for Further and  
Higher Education.

### WHAT DO I GET?

- 50 fully photocopiable worksheets per book to build, apply and develop mastery of Functional Maths skills.
- Answers, teaching notes, student checklists and curriculum mapping.
- A one-stop-shop that covers all of the Functional Maths standards.

### WHO IS IT FOR?

- Functional Skills students from Entry Level 1 to Level 2.
- Foundation learning.
- Adult numeracy students.
- Numeracy support at KS3 and KS4.
- Students with SEN including SpLD, MLD, EBD, ADHD and ASD.

### DIGITAL RESOURCES

- For an additional £5 per title get electronic versions of *Functional Skillbuilders* on CDROM.
- Use on interactive whiteboards.
- Copy to a network or VLE.
- Print and copy for students to make planning and preparation easy.

## TRY IT NOW

Use the attached worksheets to see how the 15 *Functional Skillbuilders Maths* titles will motivate your students.

## HOW TO ORDER

*Functional Skillbuilders* are only **£39.95** per title. Speaking and listening titles attract VAT. To order call **0800 389 7129** or buy online at: [www.axiseducation.co.uk](http://www.axiseducation.co.uk).

Read every page of every book and download  
more FREE resources at: [www.axiseducation.co.uk](http://www.axiseducation.co.uk).

## **Number Entry Level 1, sample page 8**

### **Add single-digit numbers. Compare numbers**

#### **Groundwork**

To introduce this task, remind students of the mathematical symbols + and =. Use OHT template 3 to re-cap on terms for addition.

#### **Worksheets**

Explain the skills your learners are going to practise, then read the instructions to them. If learners find this task difficult, allow them to use a number line or counters.

#### **Extension work**

Provide opportunities for your learners to use addition skills in a variety of ways. This should include mental arithmetic, adding tangible items, adding traditional sums, adding sums embedded in text.

## **Number Entry Level 2, sample page 9**

### **Match word problems to written calculations**

#### **Groundwork**

Use the completed example to show learners how to work out the answers to these problems.

#### **Worksheets**

Explain the skills your learners are going to practise, then ask them to carry out the activities. These two worksheets are contextualised to the hotel and the factory. You could use one worksheet to *teach* and the other to *reinforce* your learners' ability to match word problems to written calculations.

## **Number Entry Level 3, sample page 10**

### **Count stock. Add, subtract, multiply and divide**

#### **Worksheets**

Explain the skills your learners are going to practise, then read the instructions to them. These worksheets

are contextualised to the hotel, supermarket and factory. You could use one worksheet to *teach*, three to *reinforce* and then one to *check* your learners' ability to count stock.

#### **Extension work**

Provide opportunities for learners to count tangible items up to 1000.

## **Number Level 1, sample page 11**

### **Ratio and direct proportion**

#### **Groundwork**

Use the teaching point to explain the concept of ratio to learners. Ask learners if they can provide you with examples. Demonstrate to learners how proportion can be written. For example, diluting a drink one part squash to ten parts water can also be written as 1:10.

#### **Worksheets**

Explain the skills your learners are going to practise, then ask them to carry out the tasks.

#### **Group/extension work**

Ask learners to physically measure and calculate proportion. They could:

- measure quantities of drinks
- prepare ingredients for recipes.

## **Number Level 2, sample page 12**

### **Order positive and negative numbers**

#### **Groundwork**

Use the teaching point on Worksheet 1 to show learners how to put negative and positive numbers in sequence.

#### **Worksheets**

Explain the skills your learners are going to practise, then ask them to carry out the tasks.

## Measures, Shape and Space Entry Level 1, sample page 13

### Recognise coins and notes. Count coins. Add coins

#### Groundwork

Your learners will need to be fully competent with the tasks on Worksheets 1, 2, 3, 4, 5 and 6 before they tackle these worksheets.

#### Worksheets

Explain the skills your learners are going to practise, then ask them to carry out the tasks. These worksheets are similar counting and adding money activities contextualised to the hotel, supermarket and factory. You could use Worksheets 21, 22 and 23 to *teach* the skills, Worksheets 34 and 35 to *reinforce* them and Worksheets 44 and 45 to *check* your learners' ability to recognise, count and add money.

#### Extension work

Provide learners with sets of coins totalling no more than 10 pence. Ask them to add them up.

Provide learners with a handful of change totalling no more than 10 pence. Take one of the coins away and ask them how much money is left. (Curriculum element N1/E1.5 applies to this extension activity.)

Provide learners with one of each of the notes on Worksheet 45 (or use copies of the notes on the Worksheet if you don't have access to banknotes). Then:

- ask them to place the notes in value order, starting with the lowest value first
- ask them to place the coins in value order, starting with the highest value first.

Provide learners with a group of notes (no more than ten of each type) and ask them to count how many there are of each type.

Use real money to role-play counting and recognising notes and coins in a variety of situations.

## Measures, Shape and Space Entry Level 2, sample page 14

### Read, estimate, measure and compare capacity

#### Groundwork

Use the teaching point on Worksheet 11 to teach your learners the vocabulary and instruments they would use to describe and compare capacity.

#### Worksheets

Explain the skills your learners are going to practise, then ask them to carry out the tasks. These worksheets are similar activities contextualised to the supermarket and factory. Use Worksheet 11 to *teach* the skills, Worksheet 33 to *reinforce* them and Worksheet 51 to *check* your learners' ability to read and compare capacity.

#### Extension work

Provide tangible objects for learners to describe in terms of capacity.

Provide tangible amounts of liquids for learners to measure in terms of capacity.

Ask learners to accurately measure out specific amounts.

Estimate the capacity of objects in different shaped containers by sight and then measure out the capacity and compare results to the estimate.

## Measures, Shape and Space Entry Level 3, sample page 15

### Check bills, receipts and quotations. Add and subtract money

#### Worksheets

Explain the skills your learners are going to practise, then ask them to carry out the tasks. These worksheets are similar activities contextualised to the hotel and supermarket. You could use Worksheets 25 and 35 to *teach* the skills, Worksheets 38 and 39 to *reinforce* them and Worksheet 40 to *check* your learners' ability to

check for accuracy in decimal calculations.

### Extension work

Provide learners with further examples of invoices, receipts, price lists and so on. Ask learners to:

- estimate totals
- use a calculator to work out accurate costings
- find errors in calculations.

## Measures, Shape and Space Level 1, page 16

### Read, estimate, measure and compare weight

#### Groundwork

Use Worksheet 7 to show learners how to read scales. You should also discuss the instruments and vocabulary that learners would use to describe and compare weight.

#### Worksheets

Explain the skills your learners are going to practise, then ask them to carry out the tasks. These worksheets are similar activities contextualised to the hotel, supermarket and factory. Use Worksheets 7 and 21 to *teach* the skills, Worksheets 22, 30, 31 and 32 to *reinforce* them and Worksheets 44 and 45 to *check* your learners' ability to read, estimate, measure and compare weight.

#### Extension work

Provide tangible objects for learners to describe and measure in terms of weight. Ask learners to measure in grams and kilograms.

Ask learners to convert measurements between grams and kilograms.

Estimate the weight before measuring accurately.

Ask learners to accurately weigh out specific amounts.

Provide a variety of objects and ask learners which they would choose to measure in grams and

kilograms.

## Measures, Shape and Space Level 2, page 17

### Calculate area

#### Groundwork

Use the teaching points on Worksheets 12, 13 and 16 to explain how to calculate the area of rectangles, circles and composite shapes.

#### Worksheets

Explain the skills your learners are going to practise, then ask them to carry out the tasks. The worksheets are similar activities contextualised to the hotel, factory and supermarket. After using Worksheets 12, 13 and 16 to teach the skills, you could use Worksheets 27, 28, 40, 41 and 47 to reinforce them and Worksheets 51, 52, and 52 to check your learners' ability to calculate the area of circles, rectangles and composite shapes.

#### Extension work

Provide tangible objects and scale drawings for learners to calculate area. Ask learners to measure and calculate area using either metric or imperial measures.

## Handling Data Entry Level 1, sample page 18

### Extract information from lists

#### Worksheets

Explain the skills your learners are going to practise, then read the instructions to them. If your learners are able to provide answers to the questions you ask them on Worksheets 15, 16, 17, 27, 28, 29, 39 and 40 in writing, the curriculum elements in brackets will apply to these pages. All the worksheets are similar activities requiring learners to extract information from lists contextualised to the hotel, supermarket and factory. You could use a selection of worksheets to *teach*, a selection of worksheets to *reinforce* and selection of worksheets to *check* your learners' ability to extract information from lists.

#### Group work

OHT templates 1 and 2 provide learners with further opportunities to extract information from lists. OHT 1 is a numerical list. OHT 2 is an alphabetical list. Use the OHTs to conduct these exercises as group activities.

### Extension work

Source a selection of straightforward lists. Use the lists as source material for extracting information. These could include information from the local newspaper – such as television guides, sporting fixtures and sports team listings. You could combine the handling data aspect with recognising numbers – ask learners to track the texts and highlight all the numbers they can find.

## Handling Data Entry Level 2, sample page 19

### Extract information from bar charts (block graphs)

#### Groundwork

Use the teaching point on Worksheet 4 to explain how to extract information from bar charts. Make sure that your learners understand the terms *axis*, *column* and *title*.

These worksheets are similar activities requiring learners to extract information from bar charts contextualised to the hotel, supermarket and factory. You could use Worksheet 14 to *teach*, Worksheets 23 and 25 to *reinforce* and Worksheets 33 and 48 to *check* your learners' ability to extract information from bar charts.

#### Group work

Bar charts from Worksheets 14 and 33 are available as OHT templates 3 and 4. Use the OHTs to conduct these exercises as group activities.

#### Extension work

You could extend these activities by showing learners a bar chart that has columns of unequal widths –

how does this skew the data? You could also prepare two bar charts providing the same set of data with the axes swapped over. Does this affect their understanding of the data?

## Handling Data Entry Level 3, sample page 20

### Extract information from a map

#### Worksheets

Explain the skills your learners are going to practise, then ask them to carry out the tasks. These worksheets are similar activities requiring learners to use a map contextualised to the hotel, supermarket and factory. You could use a Worksheet 14 to *teach*, Worksheet 26 to *reinforce* and Worksheet 38 to *check* your learners' ability to extract information from a map.

#### Group work

OHT template 3 provides learners with a further opportunity to use a map. Use the OHT to conduct this exercise as a group activity.

#### Extension work

Source a selection of maps and use them as the basis of a variety of activities:

- calculate journey distances
- estimate journey times
- work out the quickest route from one destination to another
- use a mileage chart.

## Handling Data Level 1, sample page 21

### Extract and interpret information in tables

#### Worksheets

Explain the skills your learners are going to practise, then read the instructions to them. These worksheets are similar activities requiring learners to extract information from tables contextualised to the hotel and supermarket. You could use Worksheet 14 to

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*teach*, Worksheet 22 to *reinforce* and Worksheet 36 to *check* your learners' ability to extract information from tables.

### **Extension work**

Source a selection of tables. Use the tables as source material for extracting information.

## **Handling Data Level 2, sample page 22**

### **Extract and interpret information in pie charts**

#### **Worksheets**

Explain the skills your learners are going to practise, then read the instructions to them. These worksheets are similar activities requiring learners to extract information from pie charts contextualised to the hotel, supermarket and factory. You could use Worksheets 15 and 21 to *teach*, Worksheets 27, 34 and 35 to *reinforce* and Worksheets 44 and 45 to *check* your learners' ability to extract information from pie charts.

#### **Group work**

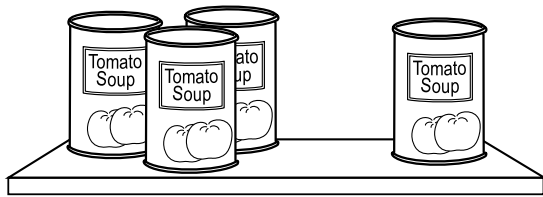
OHT template 3 provides learners with a further opportunity to extract information from pie charts. Use the OHT to conduct this exercise as a group activity.

# Number EL1 Supermarket – add it up

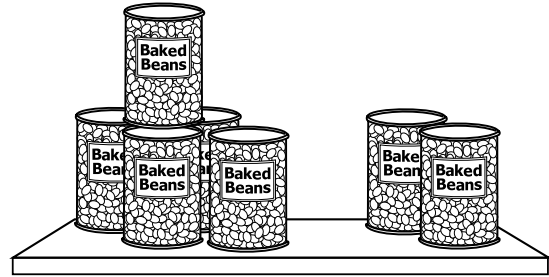


Add single-digit numbers. Count and compare numbers. Write numbers.

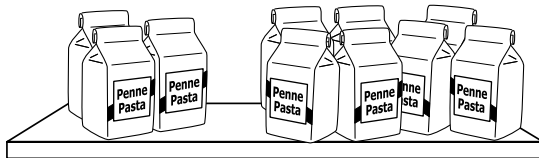
The shelves in Blackwell's Supermarket need to be stocked. Write the number of each item underneath the drawings to make a sum. Then add up the number of items on each shelf. The first one has been done for you.



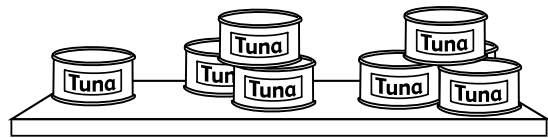
1.  $3 + 1 = 4$



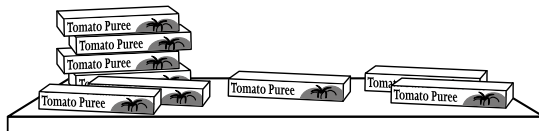
2.  $\square + \square = \square$



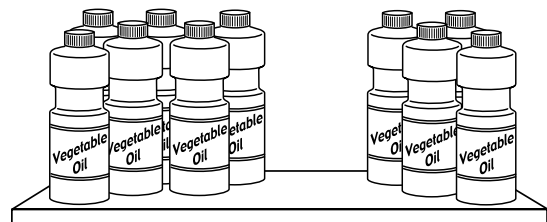
3.  $\square + \square = \square$



4.  $\square + \square + \square = \square$



5.  $\square + \square + \square = \square$



6.  $\square + \square + \square = \square$

## tutor questions

7. Which item does the supermarket have most of?
8. Which item does the supermarket have least of?

## Number EL2 Factory – match the sums



Read and write numbers. Add and subtract. Multiply.

Read these problems and use an arrow to match the problem to the sum that represents it. The first one has been done for you.

1. Line 8 produced 97 body panels but 24 were faulty. How many body panels weren't faulty?

$$10 \times 7 = 70$$

2. There are 10 production lines in the factory. Each line has 7 workers per shift. How many people in total work on each shift?

$$100 - 83 = 17$$

3. 25 supervisors work at the factory. 12 of them are away on a training course. How many of them are at work?

$$12 + 48 + 12 = 72$$

4. One of the production workers needs to collect some spares. She needs 3 boxes of rivets, 10 boxes of washers, 32 boxes of screws and 1 box of bolts. How many boxes will she have in total?

$$25 - 12 = 13$$

5. There are 100 spaces in the car park, 83 of them are taken. How many spaces are free?

$$3 + 10 + 32 + 1 = 46$$

6. Four production workers need a set of goggles and an apron. How many pieces of equipment will they use in total?

$$4 \times 2 = 8$$

7. Line 5 produced 12 body panels, 48 doors and 12 wing panels. How many items did it produce in total?

$$97 - 24 = 73$$

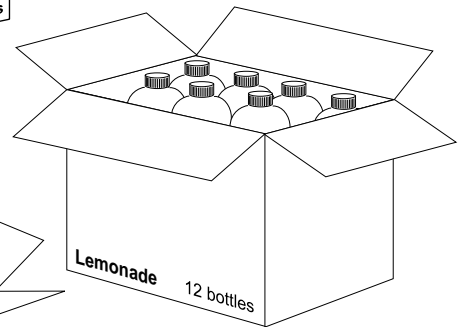
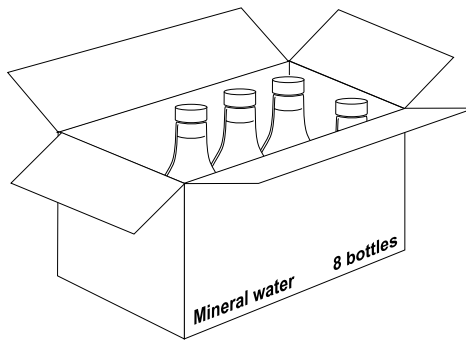
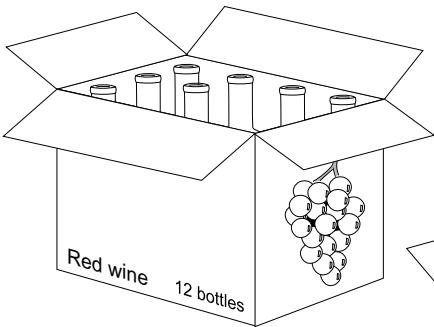
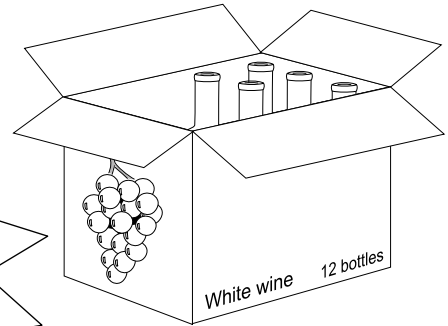
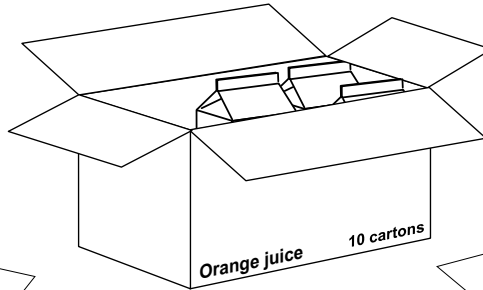
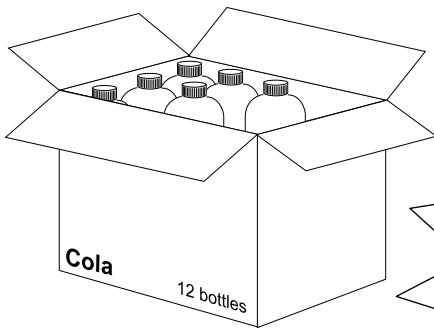


# Number EL3 Supermarket – taking stock



Count stock. Add and subtract. Multiply and divide.

This is a selection of some of the items in the stockroom. Look at the pack sizes and the amount of stock left and work out what fraction of each of these packs has been used. Give your answers in the table.



Item	No. in pack	No. used	Fraction used

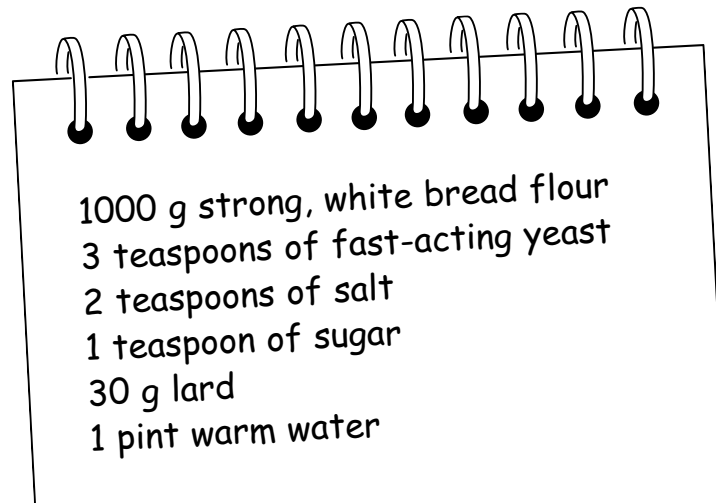
## Number L1 Supermarket – bakery orders



Use simple ratio and proportion.

At certain times of the year the demand for bread increases dramatically. This happens whenever the supermarket is closed over a holiday period such as Easter or Christmas.

Here is the recipe Bill uses every day to bake crusty white rolls. This recipe will make 20 rolls:



If Bill needs to bake more bread rolls, he will need to increase the amount of ingredients he uses in the correct proportion.

Calculate the amount of each ingredient he will need to make 40, 50 and 100 rolls.

	20 rolls	40 rolls	50 rolls	100 rolls
Flour	1000 g			
Yeast	3 tsp			
Salt	2 tsp			
Sugar	1 tsp			
Lard	30 g			
Water	1 pt			

## Number L2 Factory – checking stock levels



Order positive and negative numbers. Add and subtract large numbers.  
Calculate percentages.

**AutoParts stock is checked regularly. Sometimes stock is pre-assigned to a job before it arrives at the factory. This means that the stock shows up on a stock check as a negative number. Look at this data from a recent stock check. Re-write the numbers of the amount left in stock in numerical order, starting with the smallest amount and ending with the largest number. Then answer the questions.**

Type of stock	Pre-assigned number	Amount left in stock
Panel pins size 1	200	-143
Panel pins size 2	78	-23
Panel seals size 1	22,230	
Panel seals size 2	11670	
Panel seals size 3	127	
Panel seals size 4	56	-14
Rubber washer size 1	185	-143
Rubber washer size 2		14,625
Rubber seals size 1	1240	
Rubber seals size 2	2209	
Steel rivet size 1	167	-154
Steel rivet size 2	258	
Steel rivet size 3	1800	-1680
Steel rivet size 4	1059	
Steel washer size 1	1810	
Steel washer size 2	1243	-1231
Steel washer size 3	329	
Steel washer size 4	306	
Steel bolt size 1	22450	-22340
Steel bolt size 2	22230	-22212

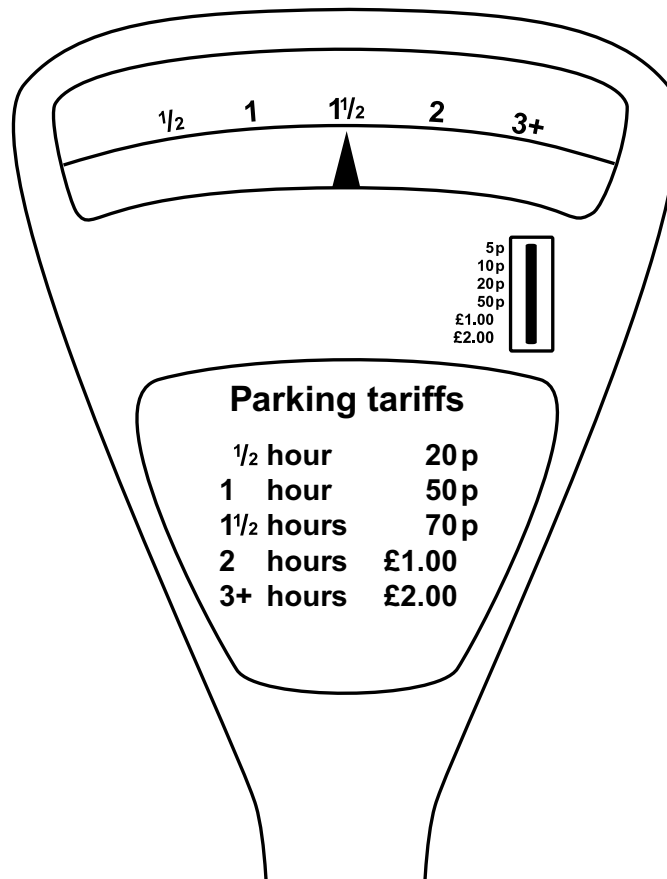
1. How many size 4 panel seals would have to be ordered to leave 100 in stock? \_\_\_\_\_
2. How many size 3 steel rivets would have to be ordered to leave 175 in stock? \_\_\_\_\_
3. How many size 2 steel washers would have to be ordered to leave 200 in stock? \_\_\_\_\_
4. What is the percentage of stock items shown as negative amounts? \_\_\_\_\_

# MSSEL1 Supermarket – choosing the right coins



Recognise and select the correct coins to pay for something.

Use the information about the parking charges to answer the questions.



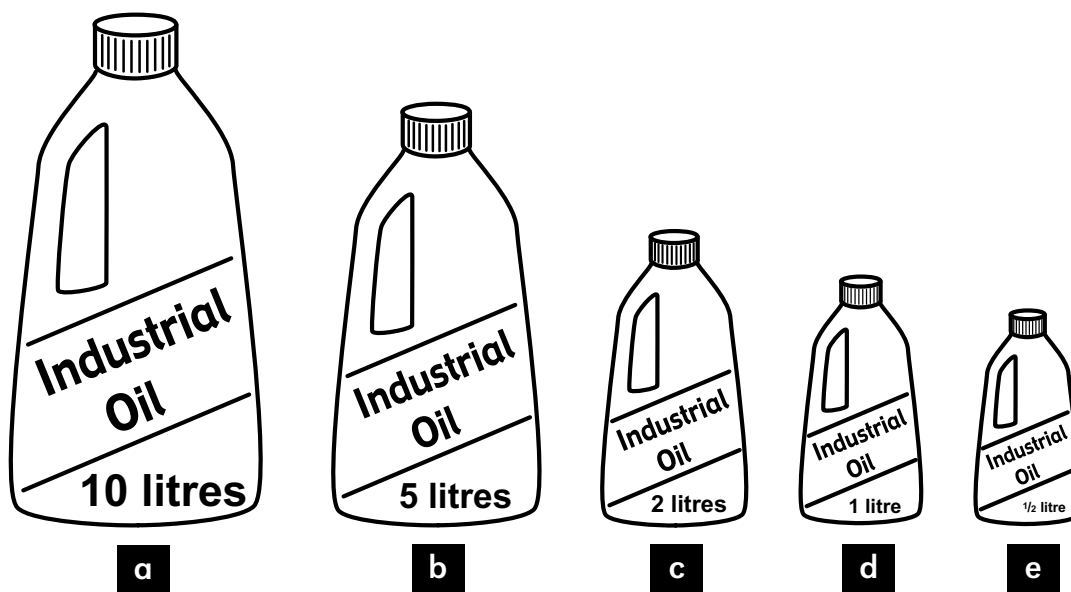
1. Which single coin would you put into the meter to pay for half an hour's parking?
2. Which single coin would you put into the meter to pay for an hour's parking?
3. Which two coins could you put into the meter to pay for one and a half hours' parking?
4. Which single coin would you put into the meter to pay for two hours' parking?
5. Which single coin would you put into the meter to pay for between three and six hours' parking?



Read and compare capacity.

The moving parts in the factory’s machinery need to be oiled to keep them running smoothly. The factory buys oil in 5-litre plastic canisters. The oil is then filled into smaller 1-litre bottles for daily use.

Use the information on these oil containers to answer the questions.



- How many 1-litre bottles can be filled from one 5-litre canister?
- Jim needs half a litre of oil. Which canister should he choose?
- Gemma needs one and a half litres of oil. Which canisters should she choose?
- Jane needs 6 litres of oil. Which canisters should she choose?
- Tony needs 3 litres of oil. Which canisters should he choose?


What other liquids can you buy in 1-litre bottles or cartons? Find out the names of five and write their names on this list.

- 6.
- 7.
- 8.
- 9.
- 10.

## MSSEL3 Hotel – check the bill



Check a bill. Add and subtract money.

Mr and Mrs Hadley stayed for two nights (mid-week) in a double room. They had bed and breakfast and the buffet evening meal on both nights. They had a bottle of house wine with both evening meals at £9.95 a bottle. They did not have room service. Their bar bill for the first night was £12.90 and for the second night it was £5.95. Mr Hadley had two hours' tennis coaching on the second day whilst Mrs Hadley spent the afternoon having a mini-pamper at the beauty salon. Use the tariff and their bill to check that their bill is correct. Note any mistakes and use a separate piece of paper to re-write the bill.

<b>Tariff</b>	
Double room and breakfast, mid-week	£60 per person per night
Double room and breakfast, Fri., Sat., Sun.	£85 per person per night
Superior room and breakfast, mid-week	£85 per person per night
Superior room and breakfast, Fri., Sat., Sun.	£115 per person per night
<b>Restaurant</b>	
3-course buffet evening meal	£15.95 per person
A la carte also available	
<b>Leisure Club</b>	
Tennis coaching	£15 per hour
Personal trainer	£12.50 per hour
<b>Beauty Salon</b>	
Manicure	£12.00
Pedicure	£14.00
Mini facial	£20.00
Luxury facial	£30.00
Waxing from	£8.00
Mini pamper afternoon	£35.00
Pamper day	£80.00

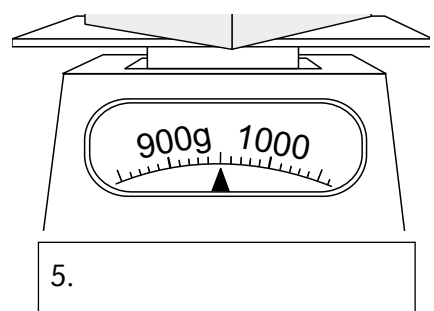
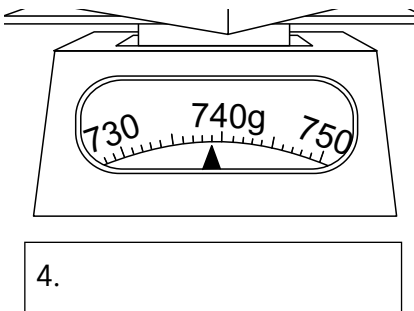
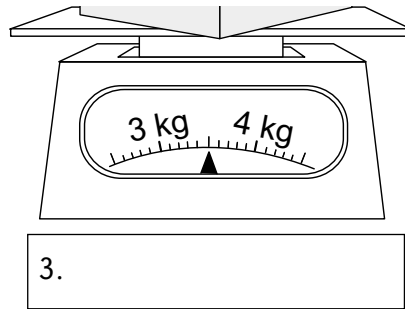
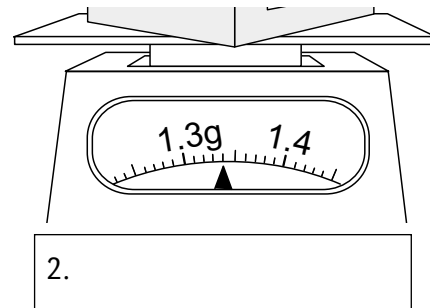
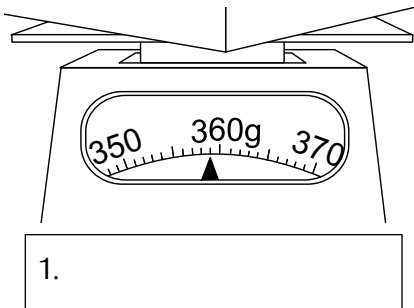
<h3>Old Hall Hotel</h3>	
Room number:	24
Guest name:	Mr and Mrs Hadley
Double room x 2 nights	£340.00
Room service	£19.95
Restaurant 2 December 2005	£41.85
Bar 2 December 2005	£12.90
Restaurant 3 December 2005	£31.90
Bar 3 December 2005	£5.95
Tennis 3 December 2005	£45.00
Beauty Salon 3 December 2005	£35.00
Total	£497.55

# MSSL1 Factory – postage costs



Read scales. Calculate postal charges.

AutoParts uses the Royal Mail to send smaller parcels. Orders are packaged securely then weighed and sent via parcel post. Use the table of charges to work out how much these parcels would cost to post.



Weight	1st Class	Weight	1st Class
60 g	£0.30	500 g	£1.78
100 g	£0.46	600 g	£2.15
150 g	£0.64	700 g	£2.52
200 g	£0.79	800 g	£2.90
250 g	£0.94	900 g	£3.27
300 g	£1.07	1000 g	£3.64
350 g	£1.21	For each extra 250 g	£0.88
400 g	£1.40		
450 g	£1.59		



Calculate area.

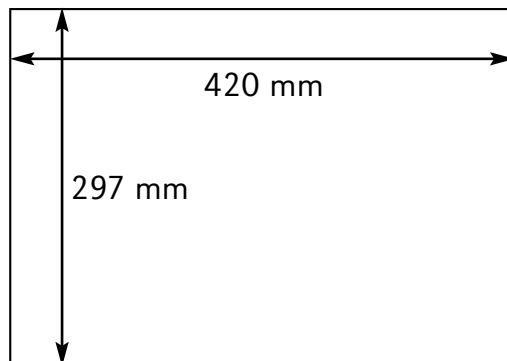
The pastry chef is preparing for a buffet at the Old Hall Hotel. He needs to be economical and not waste too much pastry. The pastry he makes will be rolled out into a rectangular sheet measuring 297 mm by 420 mm.

He will be making:

- canapés – made out of pastry circles measuring 30 mm in diameter
- tartlets – made out of pastry circles measuring 120 mm in diameter
- mini quiches – made out of pastry circles measuring 180 mm in diameter
- samosas – made out of pastry circles measuring 100 mm in diameter
- vol-au-vents – made out of pastry circles measuring 50 mm in diameter

**How many of each pastry item will Chef get out of one sheet of pastry? Complete the table.**

You might need to draw a sketch to help you.



Answering these questions will help you.

- How many of each pastry shape would fit along the long edge of the pastry?
- How many of each pastry shape would fit along the short edge of the pastry?

Pastry item	Diameter	Number out of one sheet of pastry
Canapé		
Tartlet		
Mini quiche		
Samosa		
Vol-au-vent		

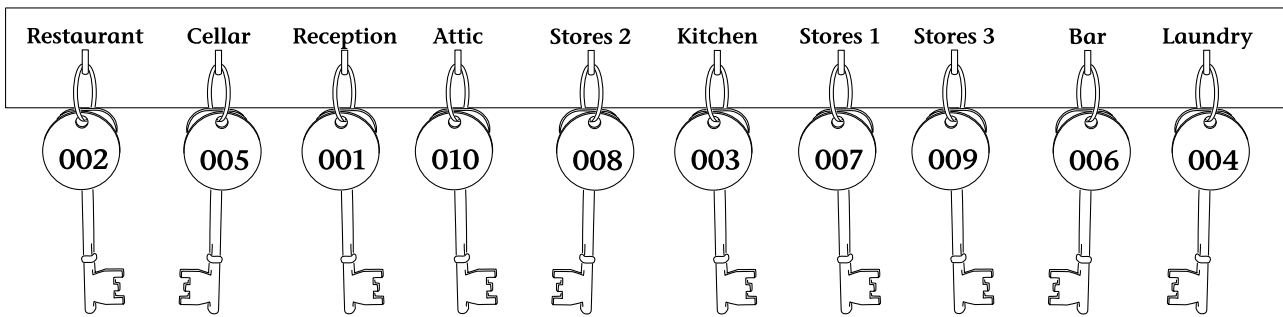


# HDEL1 Hotel – a mixed bunch!



Order information in a list.

It is the Duty Manager’s job to ensure that the hotel keys are to hand at all times. Fill in the table that shows which key is for which room. Put the keys in the table in numerical order – the first one has been done for you.



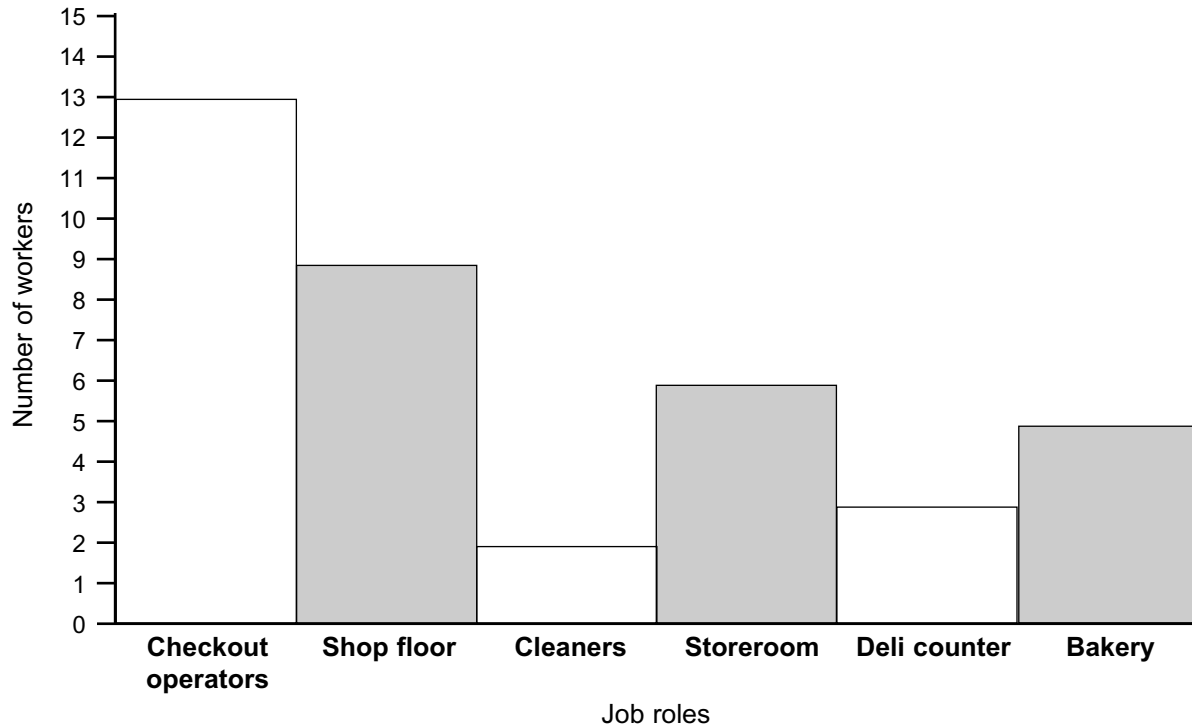
	Key number	Room
1	001	Reception
2		
3		
4		
5		
6		
7		
8		
9		
10		



Extract information from bar charts. Collect and present data.

Use the information from this block graph to answer the questions.

**Number of workers in-store at 10 am on 27<sup>th</sup> July 2006**



### tutor questions

1. What is the title of the graph?
2. How many job roles are listed?
3. How many people were working on the checkouts?
4. How many people were working in the bakery section?
5. How many fewer cleaners are there than deli section workers?
6. How many more bakery section workers are there than cleaners?
7. How many people were working on the deli counter?

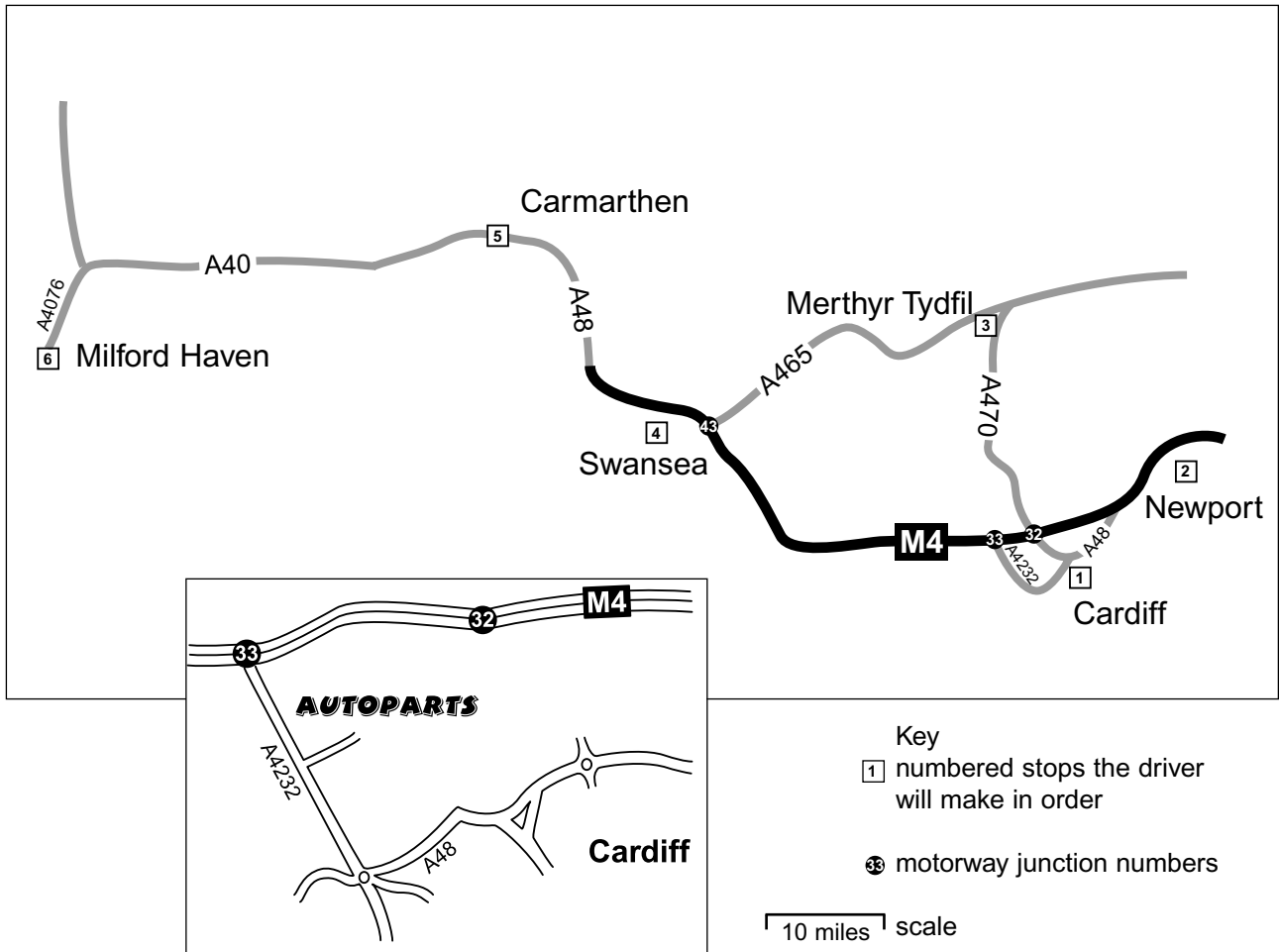
Carry out a survey like this with your friends, family or co-workers to find out what jobs they have or have had. Display your findings as either a table or a block graph.

## HDEL3 Factory – deliveries



Use a scale to calculate distances. Get information from a map.

AutoParts delivers goods to its customers. This map shows the route one of the drivers took yesterday. He started his journey at the AutoParts factory. Use the key to answer the questions on a separate piece of paper.



1. How many miles will the driver travel between Newport and Merthyr Tydfil?
2. What roads will the driver take between Carmarthen and Milford Haven?
3. At which town will the driver stop first?
4. Which is the last town the driver will stop at before getting back to AutoParts?
5. How many stops will the driver make?
6. How many miles will the driver travel between Merthyr Tydfil and Swansea?
7. How many miles would a direct journey from Swansea to AutoParts be?
8. What is the total mileage of the round trip?

# HDL1 Hotel – occupancy rates 1



Extract and interpret data from a table.

The Old Hall Hotel keeps records for several years. This table shows the room occupancy rates for the last five years. They show the percentage of rooms which were occupied each month. Calculate the average (mean) percentage room occupancy for each year and insert your answers in the table.

Percentage room occupancy 2001-2005					
	2001	2002	2003	2004	2005
January	22	23	24	26	26
February	29	30	31	31	32
March	38	39	41	41	42
April	45	47	49	48	49
May	65	66	67	67	69
June	70	73	76	76	77
July	65	69	71	71	73
August	76	79	82	83	84
September	77	78	82	84	85
October	51	53	54	54	56
November	30	31	32	33	34
December	30	30	31	32	32

Average percentage room occupancy for each year					
Year	2001	2002	2003	2004	2005
Mean					

Present this data as a bar chart on a separate piece of paper. Then calculate the range of percentage room occupancy for each year.

Range of percentage room occupancy for each year					
Year	2001	2002	2003	2004	2005
Range					

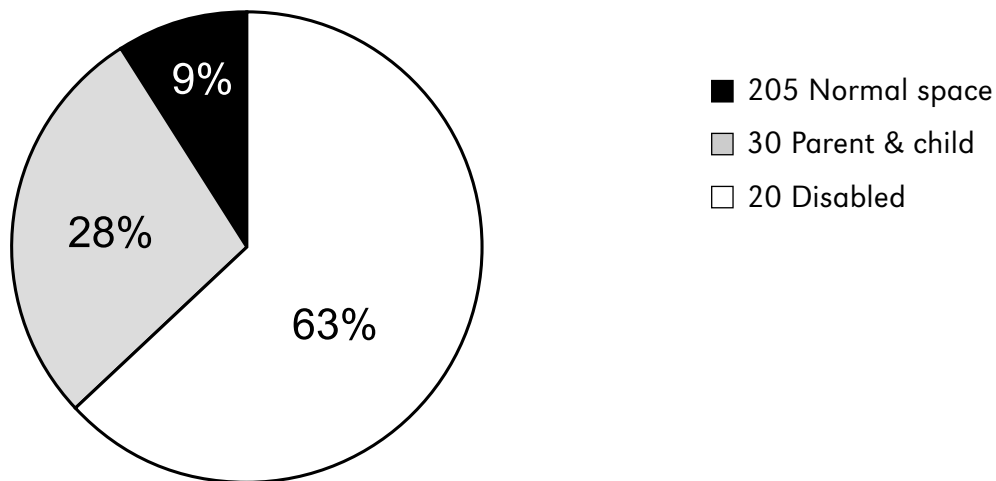
Present the percentage room occupancy data for the year 1998 as a line graph. Put the months of the year on the horizontal axis and the percentage occupancy up the vertical axis.



Extract and interpret data in pie charts.

The pie charts on this worksheet and Worksheet 35 have been drawn using data collected in a variety of surveys at the supermarket. Your task is to check that they are correct. To do this you will have to calculate each sector of the pie and check that the data matches the size of sector.

This pie chart shows the numbers of different car parking spaces available. Has the data been interpreted correctly?



To check, you need to work out how big a piece of the pie can be allocated to each type of parking space.

These are the steps to follow:

1. Work out how many parking spaces there are in total.
2. Work out the percentage of parking spaces of each type.
3. Calculate the number of degrees of the circle you need for 1% of parking spaces.
4. Using the figure from your answer to question 3, work out the number of degrees for the percentage of normal parking spaces.
5. Then work out the number of degrees needed for the percentage of parent and child spaces.
6. Then work out the number of degrees needed for the percentage of disabled spaces.