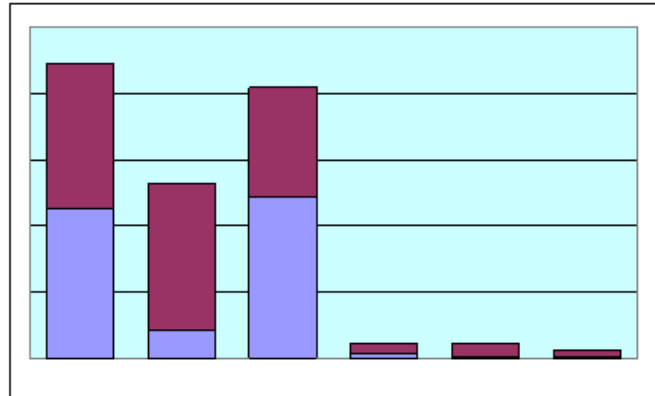
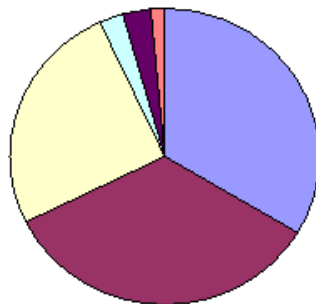


What information does this Graph give you?

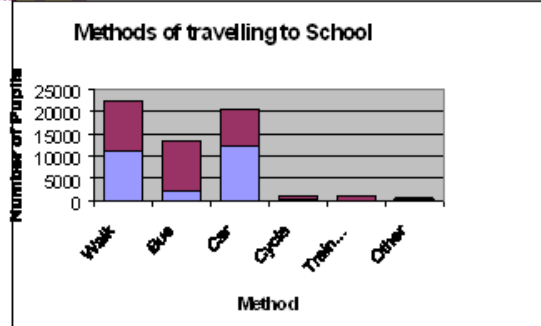


How 11-16 yr olds Travel to School



At least we know what the chart is meant to be about, but what do the individual slices mean?

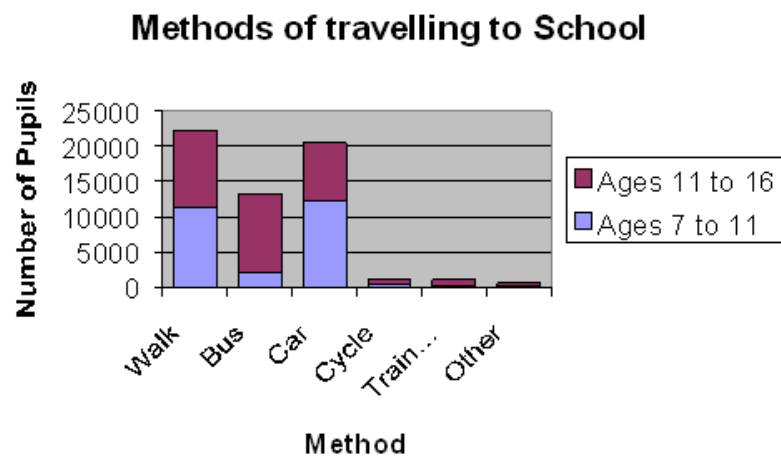
What we need are **clear labels** to help us. Lets try again:



This looks much better but there are still a couple of things missing. Can you spot them?

That's right - we need to know what the two colours in each bar mean and also where the data came from.

Lets have a final go:



Feb 2001

l.ntu.ac.uk

At last, a barchart that gives us some useful information.
Always remember:

TITLE LABELS KEY

Now draw a **useful** bar chart of either the data given below or some data you have collected yourself.

Travel Method	Walk	Bus	Car	Cycle	Train..	Other
Number of People	16	8	12	4	0	1

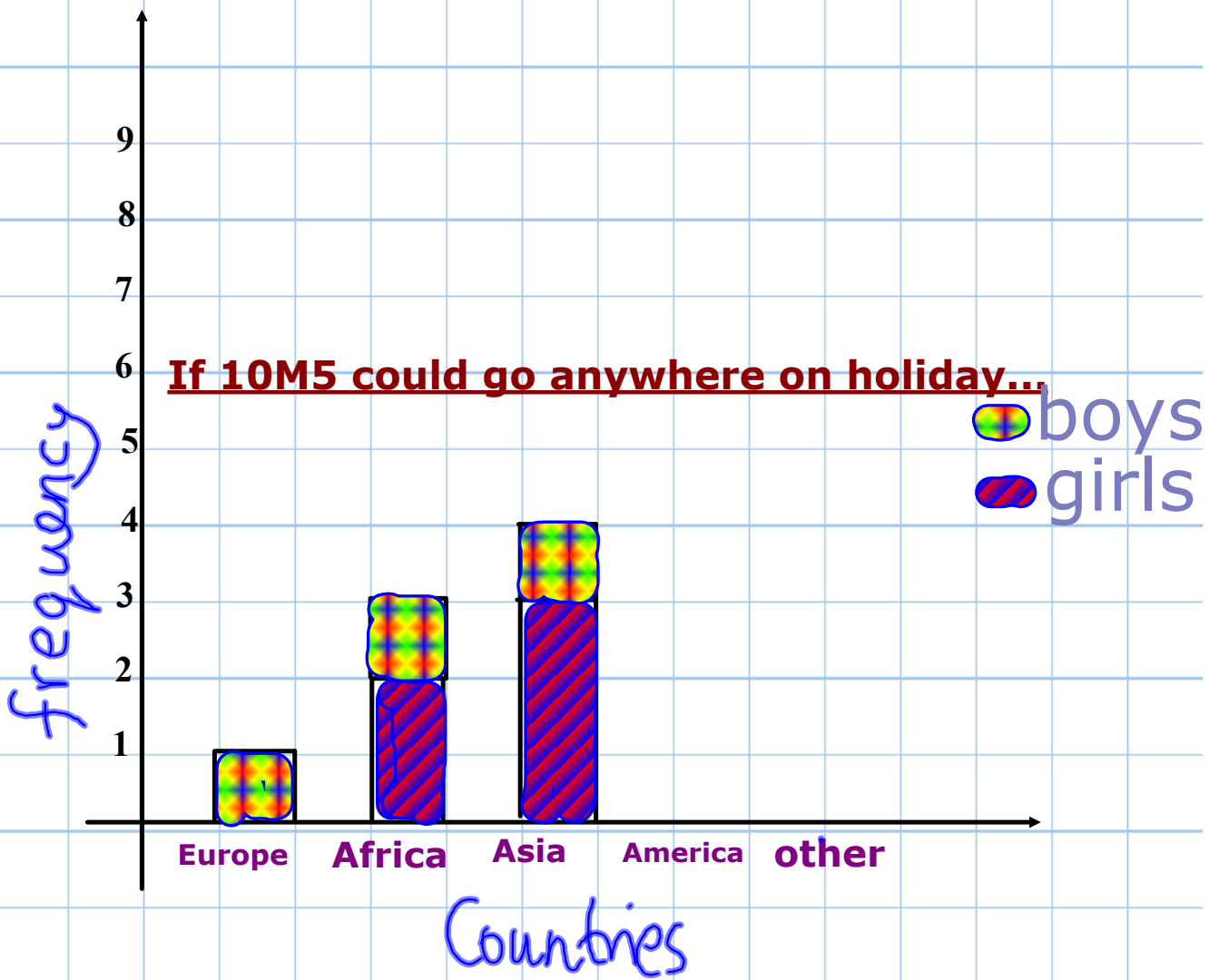
Dual Bar Graphs

When might we want dual bar graphs?

Comparing
girls and boys
vegetarians and meat eaters
age

If 10M5 could go anywhere on holiday...

	Europe	Africa	Asia	America	Other
girls	0	2	3	4	1
boys	1	1	1	7	1

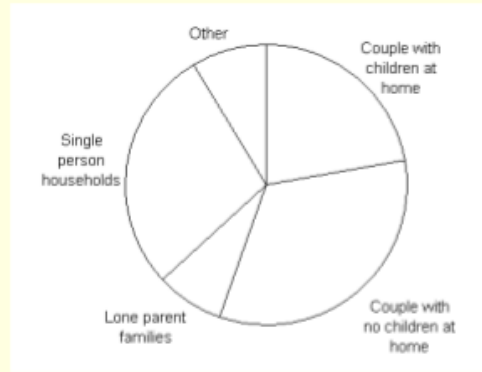
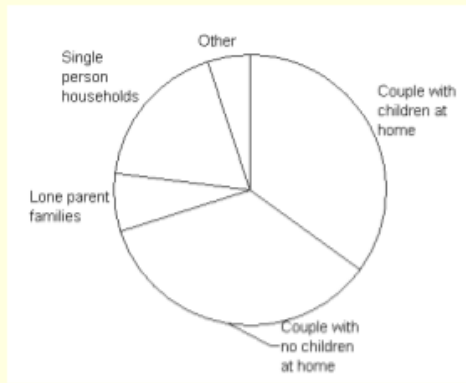


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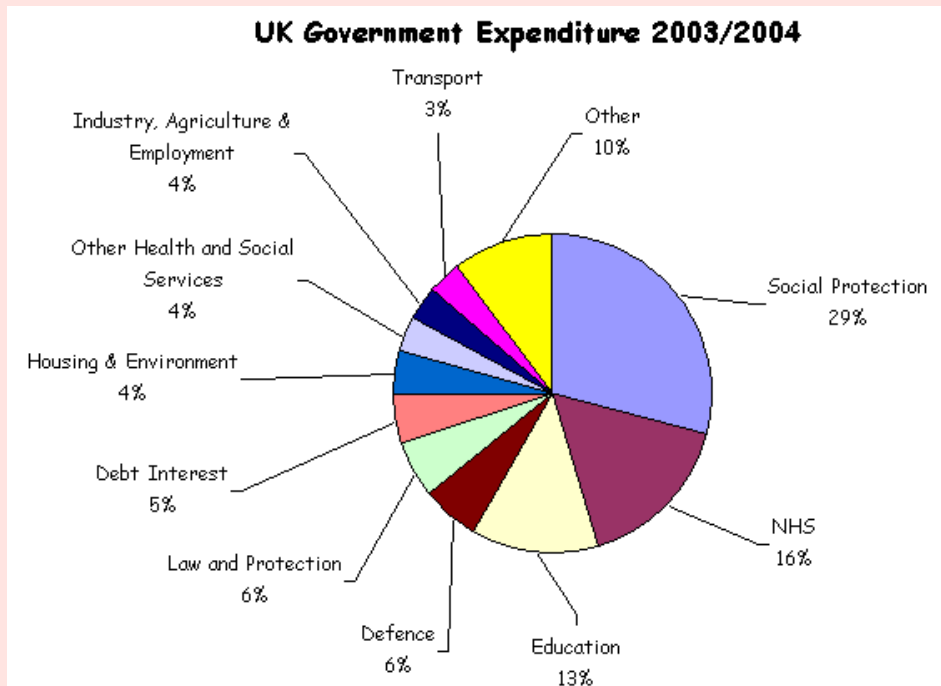
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Homework
Page 51 for Monday

Family Pie Charts



Pie Charts



TOTAL £454

Look at the pie chart. On what does the Government spend most of its budget?

- What percentage of the budget is spent on Education? How did you work this out?
- What fraction of the budget is spent, in total, on the four areas: 'Housing and Environment', 'Other Health and Social Services', 'Industry, Agriculture and Employment' and 'Other'?
- What do you think the Government means by 'Social Protection'?
- The total budget spent was £454 billion pounds. Calculate how much was spent on each area and complete the table below.

table



Sharing Out The Pot



answers
page 24 of
the UK and
its people

In 2004 the government spent 456 billion.

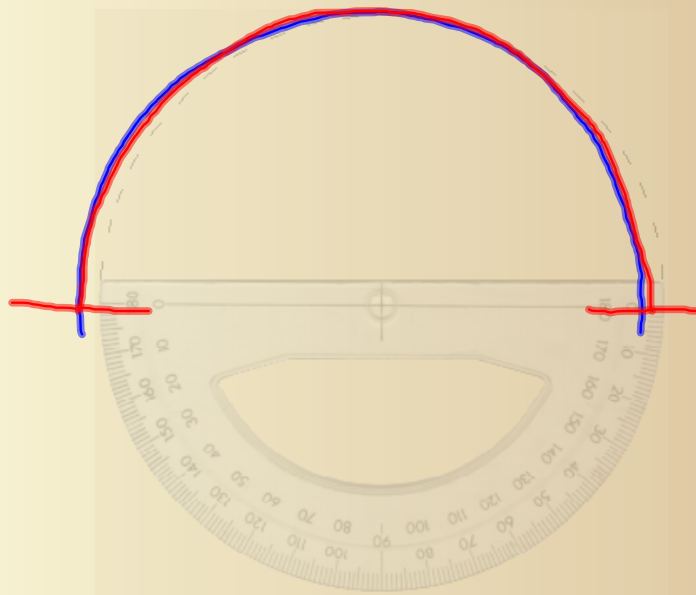
Education	
£	
	Defence
£	
	NHS
£	
	Law
£	
	Housing & Environment
£	
	Social Protection
£	
	Debt Interest
£	
	Health & Personal Services
£	
	Industry, Agriculture & Employment
£	
	Transport
£	
	Other
£	

In 2003 the UK Government had a total expenditure of 454 billion pounds (rounded figure). Below are the areas or departments where the money was spent. Can you decide how the money was split up? Put your guesses in the empty boxes.

This resource is from the CensusAtSchool project at www.censusatschool.ntu.ac.uk

Check!
Do all your figures add up to 454 billion pounds?
Can you write 454 billion in figures?
How accurate were you? Ask your teacher, or follow this link to find how the money was actually spent
http://www.statistics.gov.uk/downloads/theme_compedia/UK2004/UK2004.pdf
How would you spend 454 billion pounds?

Drawing the circle...
..not as easy as it looks!



Drawing pie charts

team	Man U	Chelsea	Arsenal	Cambridge U	total
goals	60	20	20	20	

$\frac{1}{2}$
 180°

60° 60° 60°
 $\leftarrow 180^\circ \rightarrow$

item	food	rent	car	bills	total
money £	100	160	50	50	360

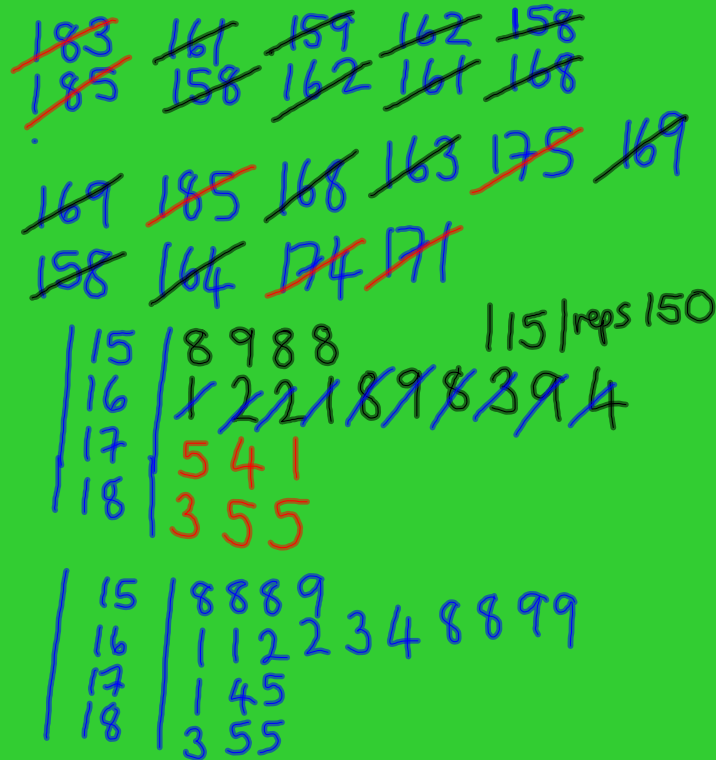
$\pounds 360$ ○ 360°
 $1^\circ = \pounds 1$

read	fiction	non- f	mag	other
freq	25	30	10	25

90 people ○ 360°
 $360 \div 90 = 4^\circ$ per person

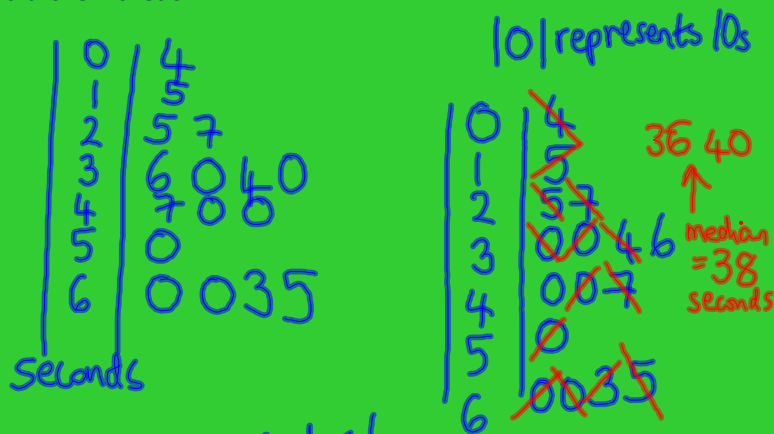
Stem and Leaf diagrams

A stem and leaf diagram to show the heights of 10M5 in cm



Stem and leaf diagrams are useful for ordering data.

A stem and leaf diagram to show ^{how} long members of 10M5 can hold their breath.



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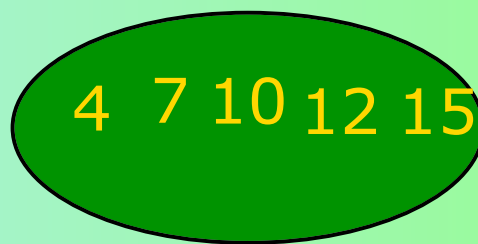
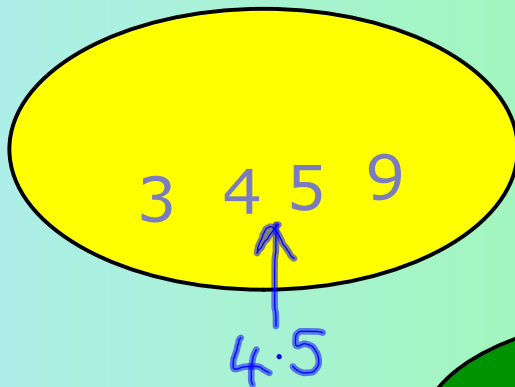
order |
 10 | 10s key | seconds

stem with leaves (2)

$$\text{Range} = 65 - 4 = 61 \text{ seconds}$$

Medians

Find the median of these sets of data.



Finding the mean from a stem and leaf diagram

Grouping

What size feet do 10M5 have?

size	tally	frequency
3		2
4		2
5		2
6	 	5
7		2
8		3
9		3
10		3

D1 + D3

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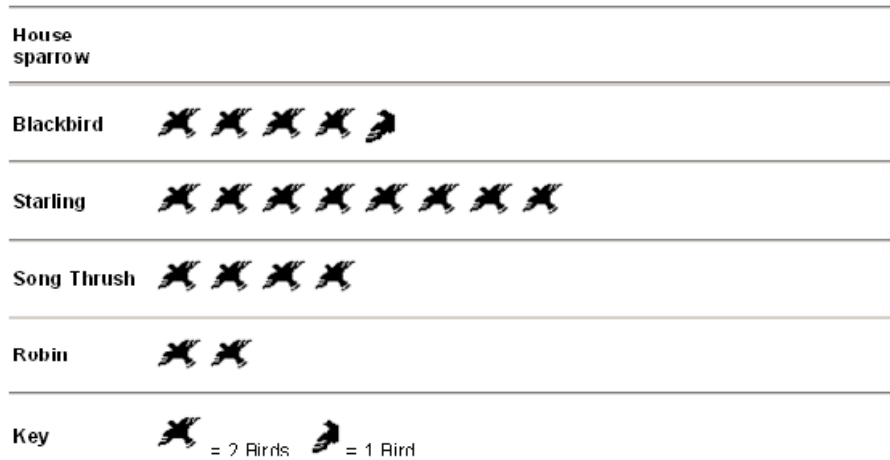


Did You Know?

Pictograms

Some of the UK's best-known birds are disappearing? Changes in the way crops are grown means there is less food for birds when they need it, and hedges have been cut down leaving nowhere for the birds to nest, shelter and feed.

Look at the pictogram showing how many birds visited a bird table during one hour in May 1970. Use the information to answer the questions below.



Questions

1. Which bird was the most frequent visitor?
2. 14 house sparrows visited the bird table. Fill in the pictogram to show this number.
3. How many more starlings came to the table than song thrushes?
4. What is the difference between the number of robins and the number of blackbirds?
5. Records show that between 1970 and 1998 starlings, house sparrows and song thrushes had declined by 1/2; that blackbirds had declined by 1/4; and robin numbers had increased by 1/2. Draw a pictogram to show the number of birds you might expect to visit the bird table during one hour in 1998.


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Test next lesson!

Pictograms

A pictogram to show colour of eyes among 10M5

colour	tally	freq
blue		
brown		
black		
green		
other		

blue	
brown	
black	
green	
other	

key:  reps 2 people