

7DBI Homework Sheet 2

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A rough guide as to how the marks are given is as follows:

		Effort Grade		Achievement of task
A	Excellent	this effort grade will rarely be given – to get this mark the work must demonstrate great effort and real clarity	+	Excellent understanding of the work
B	Good	will be given e.g. when a lot of effort has obviously been put into the work or when the work is very clearly set out	=	Good understanding of the work
C	Average	will be given for work which is of a satisfactory, acceptable standard; if you get less than C you must improve the standard at once!	–	Poor understanding of the work
D	Poor			
E	Very Poor			

If a question has one or a number of * before it then it contains points which are inherently difficult and which will be met more generally in subsequent years.

2 On pomegranates

- Try to persuade your parents to purchase a pomegranate (otherwise, find pictures on the internet). Draw and label a pomegranate in your book.
- In 2005, Tesco reported that they sold 500,000 litres a week of pomegranate juice.* Find three supposed health benefits of pomegranate juice, and *try to include some scientific evidence for these.
- Draw a labelled diagram of the inside structure of a human ovary (you will have to find this from a book in the library or the internet).
- Write down two similarities and two differences between the human ovary and the pomegranate.
*Do you think the pomegranate is a good model to help us understand the human ovary?
**Explain your reasons.
- (Optional) If you have time, find out the Greek myth of Persephone and the pomegranate – an explanation for why we have winter. Write down the story in your own words in a couple of sentences; be brief!
- Measure your height (in centimetres) and weight (in kg), and write them down in your book.

3 Drawing a line graph (growth)

The data given below give the height of a boy from when he was born to the age of twenty when he stopped growing.

Age in years	0	2	4	6	8	10	12	14	16	18	20
Height in cm	48	66	80	90	100	112	130	155	168	174	175

Plot a line with HEIGHT/cm as the vertical axis (use the smaller side of the paper for this) and AGE/years as the horizontal axis. Remember you must always label the axes of the graph and give the units the measurements are in (**it is best to write e.g. age divided by years as this means you are dealing with a dimensionless number).

Draw **as smooth a curve as possible** through the points. Stick your graph in your book.

From your graph work out

- The height of the boy when he was nine and a half years old.
- The age of the boy when he reached 150 cm height.

*Why is a line graph so much more suited to dealing with these data than a bar graph?

There are certain foods that can help boost a woman's chance of becoming pregnant, while other foods can harm her chance of conceiving. Find out five facts about the effects of diet on fertility.