The Smith Family Case Study 1

Use the information provided to complete question 1

1. The income of the Smith family is shown below

Mrs Smith	Annual Salary	£30 000

	Hourly Rate	£10.00
	Normal hours per month	160
Mr Smith	Overtime Rate	Time and a half

(a) **Use the information above to complete the following payslips**

(An entry is required where the text is in Bold)

Mrs Smith	Employee No 349786	Date: 31 August
NI No: NY98 34 32 W	Annual Salary £30 000	**Gross Monthly Salary**
Tax deducted £521.87	NI deducted £298.62	**Net Pay**
Total Deductions		

Mr Smith	Employee No 386903 NI No: NH76 96 35 P	Date: 31 August
Basic Salary: £10.00 per hour Hours worked : 160 **Total Basic Pay**	Overtime Hours of overtime: 20 **Overtime rate:** **Overtime Pay:**	
Total Gross Pay:		
Tax Deducted: £395.45	NI Deducted: £245.76	**Total Deductions**
		Net Pay

(b) **Calculate Mr and Mrs Smith's total monthly income**

2. Look at the regular expenditure of the family in the table below

(a) Calculate the total monthly expenditure

Expenditure	
Mortgage	£850
Gas/Electricity	£135
Council tax	£128
TV. Phone and broadband	£82
Credit card	£150
Insurance	£87
Food	£420
Petrol	£180
Clothes	£120
Pension	£240
Total Monthly Expenditure	**£**

 (b) **Calculate how much money is left over each month**

3. The Smith family (2 adults and 1 child) are planning to go on a 7 night holiday. They have chosen to go to Italy and will stay in a Hotel. Three different travel companies offer flight and hotel packages.

They will each take one item of luggage. The three packages are shown below

Company A – 7 Nights		
Price per Adult	Price per Child	Each piece of luggage
£398	£299	£20

Company B- 7 nights	
Price per person	Each piece of Luggage
£425	£5.00
15% off per child	

Company C- 7 nights	
Price per Adult	Price per Child
£450	£400
Special offer: 15% discount All baggage included	

(a) Look at all 3 holiday packages and recommend the cheapest company for the Smith family.

You must give a reason for your answer.

4. The Smith family want to take £800 in cash on Holiday. They need to change it to Euros.

Exchange Rates		
Country	Currency	Rate of Exchange for £1
Australia	dollars	1.53
Italy	euros	1.25
Canada	dollars	1.55
India	rupee	87.09

(a) Calculate how many Euros they will get for £800

5. The Smiths plan to buy **a** second hand car for £2000. They need to take out a loan. They are offered 2 options listed below.

	APR	Loan Term
Option 1	8.5%	12 months
Option 2	7.5%	6 months

(a) Calculate the monthly repayment for each loan payment option

Loan Payment Option 1:

Loan Payment Option 2:

(b) Which payment option should they use?

Give a reason for your answer

6. The Smith Family have to drive to London for their Flight to Spain.

They have to drive from Glasgow to London. The approximate distance is 650km. The duration is dependent on many factors. To help estimate the driving time to London, the Smith family research different driving times and the distances travelled.

The findings are as follows:

Distance (km)	Drive duration (hours)
60	1
420	7
700	9
110	1.5
120	2
300	5

(b) Using the data in the table, draw a scattergraph and use the line of best fit to estimate the driving time to London. *You must use the 1cm square paper provided to complete this.*

7. When the Smith family arrive at the airport in London, along with other tourists are asked why they chose Italy as a holiday destination

The results of the survey are shown below

weather	beach	weather	weather	sight seeing
weather	beach	football	sight seeing	weather
sight seeing	weather	sight seeing	football	weather
beach	beach	weather	beach	sight seeing

Using the results gathered at the Airport on the reasons tourists were travelling to Spain:

(a) Summarise the results in a frequency table *using the 1cm square paper provided.*

(b) Construct an appropriate graph to display the results *using the 1cm square paper provided.*

(c) An advertising company is trying to attract more tourists to Spain. Use the results from the survey above to choose a main theme for the company to use in their adverts.

Give a reason for your answer

8. Whilst on holiday, the Smiths recorded the daily high temperature. The results are shown in the table below along with the daily high temperature in Glasgow on the same day.

	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
Italy °C	28	30	32	29	29	30	27
Glasgow °C	22	24	22	25	23	20	18

(a) Using the data above, calculate the mean temperature and the range in temperature for both Italy and Glasgow

(b) Use your answers from part (a) to explain which place has the warmer temperature and which has the most consistent temperature.