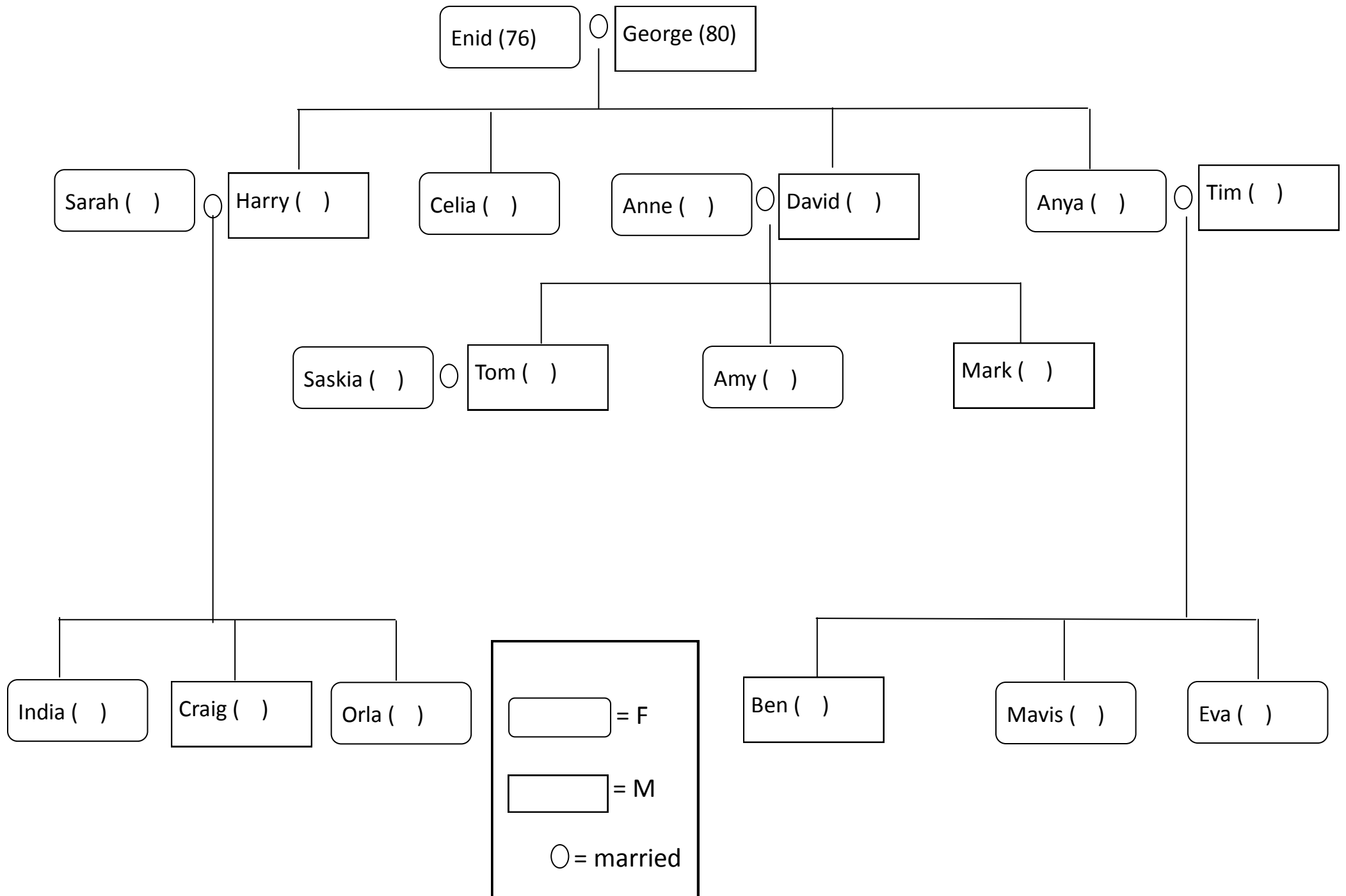


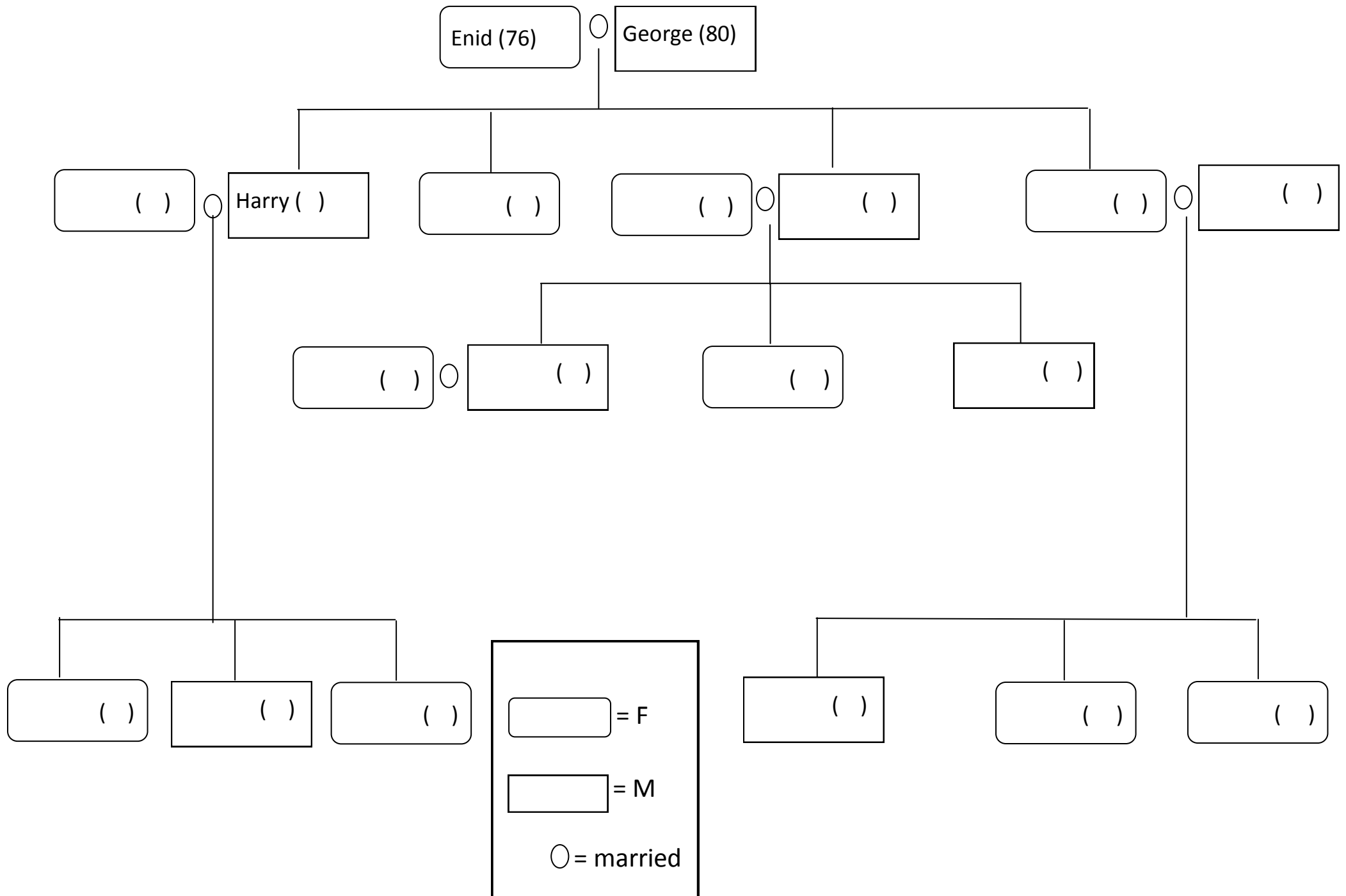
## **Inheritance Investigation**

When George reached the age of 60, he took his wife Enid and emigrated to Australia. He lost touch with the rest of his family and bought a small farm. Five years later, gold was discovered on his farm and he became extremely rich. When he was 80 years old he decided to share some of his wealth with his family in UK. Being somewhat elderly and having lost touch with his UK family, he hired a private investigator to track down his relatives.

The private investigator placed adverts in newspapers. 24 people wrote in. As William only had 17 relatives, it is obvious that some of the claimants are not relatives.

It is your job to first fill out George's family tree and then look at the statements to decide who is a true relative and who deserves no money!





## Clues to fill in family tree

**As nobody is older than 100, a 100 number square might be useful.**

1. George and Enid's eldest son Harry is 26 years younger than his father.
2. Harry's wife Sarah is 23 years younger than Enid.
3. Harry and Sarah's oldest daughter is called India. She has 150 friends on Facebook. In 25 years' time, she will be 50.
4. India's brother is called Craig. His age is a multiple of 3. In 4 years' time he will be 25.
5. India's sister Orla is older than Craig. She likes to cook omelettes. When she is 3 times her current age, she will be 66.
6. George and Enid's other son David planted 44 sycamore trees last year. 6, 8, 4 & 12 are factors of his age.
7. David's wife Anne is 3 years older than David. She lives at 50 Thomas Rd.
8. David and Anne's oldest son Tom is married to Saskia. When he was half his current age, he was 15.
9. Saskia is mad on horses. She is 3 years younger than her husband.
10. Amy used to argue a lot with her brother Tom. Her age is  $2 \times 13$ .
11. Mark is David's youngest son. His age is  $\frac{2}{3}$  of his older brother Tom. His favourite breakfast cereal is 80% fat free.
12. George and Enid's daughter Celia never married. Her age is  $3 \times 17$ .
13. George and Enid's youngest daughter Anya married when she was 21. She went to Thailand for her honeymoon. Her age is a multiple of 15. She is older than 31.
14. Anya's husband is called Tim. He is 10 years older than Anne.
15. Anya says that Ben is her favourite son! Anya was 27 years old when Ben was born.
16. Mavis is one of Ben's sisters. Her favourite colour is lilac. Her age is  $\frac{1}{3}$  of 39.
17. Mavis shares a bedroom with her younger sister Eva. Eva's age has 2 digits. The first digit is the same as the second digit.

## Clues to fill in family tree

**As nobody is older than 100, a 100 number square might be useful.**

1. George and Enid's eldest son Harry has an age which is a multiple of 6 and 9. It is greater than 40.
2. Harry is married to Sarah. Sarah loves gardening. Her age is a prime number. The sum of the digits of her age is 8. She is younger than George.
3. Harry and Sarah's oldest daughter is called India. She has 150 friends on Facebook. Her age is a square number. The product of the digits of her age is 10.
4. India's brother, Craig got engaged on 29<sup>th</sup> January. His age is a multiple of 7. The difference between the digits of his age is 1.
5. In 5 years' time, Craig's sister Orla will be half the age Harry is now.
6. George and Enid's other son David planted 44 sycamore trees last year. 12 and 16 are factors of his age.
7. David's wife Anne is younger than Sarah but older than David. She lives at 50 Thomas Rd. Her age is divisible by 3.
8. David and Anne's oldest son Tom is married to Saskia. 5 years ago, his age was a square number. In 6 years' time, it will be a square number again.
9. Saskia spent £25 on gifts last month. She is  $\frac{9}{10}$  of her husband's age.
10. Amy used to argue a lot with her brother Tom. Amy's age is the average of Tom's, Craig's and Saskia's.
11. Tom's brother Mark's age is 80% of his cousin India's. His favourite breakfast cereal is 80% fat free.
12. George and Enid's daughter Celia never married. The product of the 2 digits of her age is the first digit. The sum of the two digits is 45 less than her age.
13. George and Enid's daughter Anya married when she was 21. She went to Thailand for her honeymoon. The sum of the digits of her age is 20% of her age. The product of the digits = Mark's age.
14. Anya's husband is called Tim. His age is a prime number. The sum of the digits of his age is also a prime number. He is older than 50 but not yet 65.
15. Anya says that Ben is her favourite son! Two years ago the square root of his age was 4.
16. Mavis is one of Ben's sisters. Her age is a prime number. It has 2 digits. The sum of these digits is a square number. The product is the same as the second digit. Her favourite colour is lilac.
17. Mavis shares a bedroom with her younger sister Eva. Eva's age is also a prime number. Her favourite colour is brown. The first digit of her age is the same as the second digit.

## People Claiming Money

Claiming to be	What they say	True	False
Harry	I am George and Enid's oldest son. I am 54 years old. I am married to Sarah and have one son and 2 daughters.		
Ben	I am George and Enid's grandson. I am 18 years old and have one sister. My mother is called Anne.		
Saskia	I am married to Tom. I am mad about horses. I am 27 years old. My father –in-law is David.		
Craig	My younger sister is called India. Enid is my grandmother.		
Amy	I am 5 years older than my brother Mark. George is my grandfather.		
Orla	I am 22 years old. I am one year older than Craig and 3 years younger than India.		
Mavis	I am 13 years old. My younger sister is 3 years younger than me.		
Anne	I have 3 children. My husband, who is 3 years younger than me, is George and Enid's son.		
Tim	I am married to George and Enid's daughter Anya. We have a good marriage because we are the same age.		
Sarah	I am married to Harry (George and Enid's oldest son). Harry is one year older than me.		
Tom	David is my father and George is my grandfather. I am 30 years old.		
Celia	George and Enid are my parents. I am 51 years old and have a husband who is 2 years older than me.		
Eva	Hi, I am Eva. My mum is called Anya. Her dad is George who lives in Australia. I am 11 years old. I want to buy a new phone.		
David	I am one of George and Enid's sons. I am married to Anne. I am 48 years old and love sycamore trees.		
Amy	My father is called David. He is 22 years older than me. I have a younger brother called Mark and an older brother Tom.		
Mark	I am 22 years old. I am a grandson of George and Enid. I play the drums and need money for a new set.		
Ben	I am 18 years old. I have two younger sisters. My mother Anya is one of George and Enid's daughters.		
Craig	I am 21 years old. Anya is my mother and David is my father.		
Mavis	I am 13 years old. My hobbies are fashion and watching TV. My 18 year old brother doesn't deserve any money.		
Harry	I am George and Enid's first son. I visited them in Australia last year. My wife and I have 4 children.		
Tim	George is my father. My wife Anne is younger than me. We have 3 children.		
Celia	Enid is my mother. I am 4 years younger than Harry and 4 years older than David.		
Mark	David is my father. George is my grandfather. I am 6 years younger than my sister Amy.		
Sarah	I am the daughter-in-law of George and Enid. I married their son Tim just after we left university.		

### **Extension 1**

As a reward for your hard work, George and Enid have decided to pay you. For each one of their relatives you have correctly identified, you will receive £30. For every genuine relative you thought was lying, you will lose £40 and for every false relative that you thought should be paid, you will lose £50.

How much money will you earn?

### **Extension 2**

George and Enid have decided to give 200,000 Australian dollars (AUD) to each genuine son or daughter, 100,000 (AUD) to each genuine grandson or granddaughter and 50,000 AUD to anyone (genuine) who has married either a son or daughter or a grandson or granddaughter.

How much will each person receive?

How much money in total are George and Enid giving away?

Which relatives are yet to be found?

### Extension 3

The money being sent is in Australian Dollars. The relatives can choose one of 3 banks to send them the money. The banks have different exchange rates and different charges. Which bank should each type of relative choose?

Remember there are only 3 amounts of money being sent:

Sons or daughters: 200,000 Australian Dollars

Grandsons or granddaughters: 100,000 Australian Dollars

Wives or husbands of the direct family: 50,000 Australian Dollars

The bank fee for sending the money is taken before the remaining money is changed into £.

Use a calculator or a spreadsheet.

Bank	Fee for sending money	Exchange rate AUD/£ 1-	Exchange rate AUD/£ 75001-	Exchange rate AUD/£ 150001-
Melbourne	200 AUD	1.60	1.57	1.55
Camberra	100AUD	1.65	1.60	1.55
Lostashes Bank	0.5% of total money	1.60	1.56	1.55