Samantha is playing the computer game "Castle Challenge".

To enter the castle she needs the correct four digit code.

The computer gives her some clues:

- only digits 1 to 9 can be used
- each digit is greater than the one before
- the sum of all four digits is 14.

(a) The first code Samantha found was 1, 3, 4, 6.

Use the clues to list all the possible codes in the table below.

1	3	4	6

3

(b) The computer gives Samantha another clue.

- three of the digits in the code are prime numbers

What is the four digit code Samantha needs to enter the castle?

1

Ans

3. Zoe is a member of a gym.

The gym offers the following exercise sessions.

Exercise	Session Time
Weights	15 minutes
Dance	40 minutes
Running	20 minutes
Cycling	30 minutes
Swimming	45 minutes

Zoe is advised to choose **three** different exercises.

She wants to exercise for a **minimum of 90 minutes**.

One possible combination of three different exercises is shown in the table below.
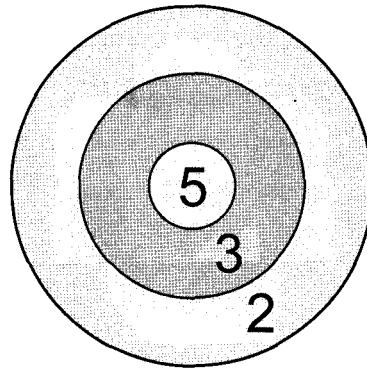
Complete the table to show all the possible combinations of three different exercises Zoe can choose.

3

Weights	Dance	Running	Cycling	Swimming	Total Time (minutes)
		✓	✓	✓	95 minutes

At a school fun day, prizes can be won by throwing darts at a target.

Each person throws **six** darts.

Points are awarded as follows.

	POINTS
Centre	5
Middle Ring	3
Outer Ring	2
Miss	0

Prizes are won for **25 points or more**.

Complete the table below to show all the different ways to win a prize.

4

Number of darts scoring 5 points	Number of darts scoring 3 points	Number of darts scoring 2 points	Number of darts scoring 0 points	Total Points
4	2	0	0	26

Christy needs a four-digit code to switch on her mobile phone.

She uses the digits from her birth date 4/3/89, but in a different order.

She knows that the last digit is 8.

One of the possible four-digit codes Christy could try is shown in the table below.

Complete the table to show all the possible four-digit codes.

4	3	9	8

3

Book Sale

Giorgio Domatelli's Cookery Books

Soups	£5·99
Pasta	£8·99
Chicken	£10·99
Fish	£11·99
Puddings	£4·99

Dayna wants to buy cookery books.

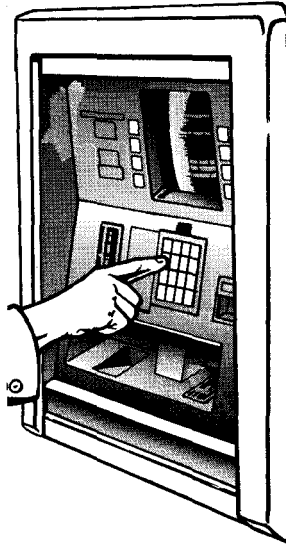She chooses books from the cookery series shown above.

- She wants to spend between £15 and £20.
- She does not buy more than one copy of any book.

One way Dayna can choose her books is shown in the table below.

Complete the table to show all the different ways Dayna can choose her books.

3

BOOK TITLE	BOOK TITLE	BOOK TITLE	TOTAL COST (£)
Pasta	Chicken		19·98

To get money from a cash machine you need an appropriate card and a four digit Personal Identity Number (PIN).

David knows:

- his PIN contains the digits 2, 5, 6 and 9;
- 2 is the first digit.

One possible PIN is shown in the table below.

Complete the table to show all the possible PINs.

3

2	5	6	9