

You are going to toss the coin $\mathbf{1 0}$ times, then $\mathbf{2 0}$ times, then $\mathbf{3 0}$ times.
Before you do, how many heads and how many tails do you think you should get for each go? Write what you think in this table:

| Number of tosses | Number of Heads | Number of Tails |
| :---: | :--- | :--- |
| 10 |  |  |
| 20 |  |  |
| 30 |  |  |

Now toss the coin 10, 20 and then $\mathbf{3 0}$ times and write in the next table how many heads and how many tails you had:

| Number of tosses | Number of Heads | Number of Tails |
| :---: | :--- | :--- |
| 10 |  |  |
| 20 |  |  |
| 30 |  |  |

Did you get the same number of heads and tails in both tables?
Discuss your results with your teacher or parent.

Here is an experiment for you to try.
You will need to carry out a survey to find out how many brothers and how many sisters the people in your class have, until you have 60 brothers and sisters altogether.

Before you do, how many brothers and how many sisters do you think they should have? Write what you think in this table:

| Number Altogether | Number of <br> Brothers | Number of <br> Sisters |
| :---: | :--- | :--- |
| 60 |  |  |

Now ask people about their brothers and sisters and write in the next table how many brothers and how many sisters they had. You may need to ask people in other classes.

| Number Altogether | Number of <br> Brothers | Number of <br> Sisters |
| :---: | :--- | :--- |
| 60 |  |  |

Did you get the same number of brothers and sisters in both tables? Discuss your results with your teacher or parent.

Now repeat the experiment, but this time count men and women over 60 years old. You will need lots of grandmas and grandpas!!!

Here is an experiment for you to try.
You will need to throw a normal six sided die 50 times and record the number of times you get an odd number and the number of times you get an even number.

Before you do, how many odd numbers and how many even numbers do you think you should get? Write what you think in this table:

| Number of Throws | Number of Odd <br> Numbers | Number of Even <br> Numbers |
| :---: | :--- | :--- |
| 50 |  |  |

Now throw your die and write in the next table how many odd numbers and how many even numbers you threw.

| Number of Throws | Number of Odd <br> Numbers | Number of Even <br> Numbers |
| :---: | :--- | :--- |
| 50 |  |  |

Did you get the same number of odd numbers and even numbers in both tables? Discuss your results with your teacher or parent.

Would you get the same number of odd numbers and even numbers if you repeated the experiment?

## Here is an experiment for you to try.

You will need to put ten red and ten blue cubes or balls in a box or bag, so that you can take them out one at a time, but not see which colour you are choosing. Put the cube back each time you choose one.

Before you do this, how many red cubes and how blue cubes do you think you should get if you choose $\mathbf{8 0}$ times? Write what you think in this table:

| Number of <br> Choices | Number of Red <br> Cubes | Number of Blue <br> Cubes |
| :---: | :--- | :--- |
| 80 |  |  |

Now choose a cube $\mathbf{8 0}$ times and write in the next table how many red cubes and how many blue cubes you chose.

| Number of <br> Choices | Number of Red <br> Cubes | Number of Blue <br> Cubes |
| :---: | :--- | :--- |
| 80 |  |  |
|  |  |  |

Did you get the same number of red cubes and blue cubes in both tables? Discuss your results with your teacher or parent.

Would you get the same number of red cubes and blue cubes if you repeated the experiment?

## Answers

## Pages 1, 2, 3 and 4

Expected results are half of total repetitions, but it is unlikely that in practice this is achieved. Repeating an experiment is unlikely to produce the same results again, although this is not unheard of.

With the older generation question, there should be more women than men.

