# Forming Equations

### Prior Knowledge:

To understand the difference between an expression and an equation, and to use these words correctly

**Activities:**

Which is which?

Write your own expressions and equations.

### Prior Knowledge:

To form expressions when the variables are given

### Activities:

How many biscuits do I have if…

1. I buy *g* biscuits and then I buy another *k*?
2. I buy *f* biscuits and then I eat *d* of them?
3. I buy *x* packets each containing *y* biscuits?
4. Write your own question which involves 2 operations.

### Prior Knowledge:

How to form expressions when the variables are not given

### Activities:

Kate buys a bunch of bananas and eats some when she arrive home. How many does she have left?

### Aims:

To form equations when variables / unknowns are given to you

To understand that thinking of letters as numbers may help you express a situation algebraically

**Activities:**

Example

Caroline buys p cupcakes and shares them between the x teachers at school. Each teacher receives q cupcakes.

Example 2:

Jane travels 7 miles in a taxi that costs pounds per mile. The trip costs pounds in total.

Key points:

Decide on the final variable after the calculation.

Don’t use the same number for two variables.

Don’t use the number 0 or 1.

Section A

### Aims:

To form equations where there are two types of variable

### Activities:

Example:

Cakes cost francs each and donuts cost francs each. Hazel buys 5 cakes and 3 donuts, spending 30 francs in total.

Henry buys bananas, which each weigh 50 grams and kumquats, which each weigh 30 grams.

1. In total, his fruit weighs 2 kilograms.
2. The bananas weigh the same as the kumquats.

Section B

### Aims:

To reverse the previous questions – to turn equations into sentences.

### Activities:

Example

Freya goes to buy some fruit.

She buys b bananas and t tomatoes.

What might  mean?

Worksheet Section C

### Aims:

To form equations where the variable is transformed in a complex manner.

### Activities:

Example

I have p sweets. Jamie has 10 fewer sweets than I do and Lucy has 20 more than I do. Mark knows that he has twice as many sweets as Lucy and four times as many sweets as Jamie.

Worksheet Section D

**Assessment questions:**

Dora buys m packets, each containing q chocolates. She gives t chocolates to her friends and has p left.

Carrie brings x chocolates to school and shares them equally between b teachers and c pupils. Each person receives h chocolates.