# Forming Expressions

### Prior Knowledge:

Vocabulary associated with algebra

### Activities:

Give examples of:

1. A variable
2. An expression
3. An identity
4. Write down another word that can be used for “variable”.
5. Unknown

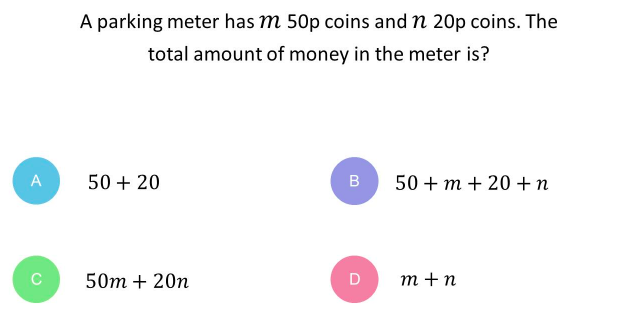
### Prior Knowledge:

How 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.



### Aims:

To define your own letters to form expressions

### Activities:

Examples:

1. Kate buys a bunch of bananas and eats some when she arrive home. How many does she have left?
2. There are some people on a bus, 1/3 of them get off and some more get on. How many are now on the bus?

Section A

1. I leave a packet of biscuits on the table and the teachers steal the same number of biscuits each. How many biscuits do I have left?

Section B+C+D

Critique these solutions:

1. Zoe buys a bag of sweets and eats some before sharing the rest equally between her friends. How many does each of her friends receive?

Let p be the number of sweets in the bag initially.

Let q be the number Zoe eats

Let r be the number she shares equally between her friends.

It should be: Let r be the number of friends she shares them between.

1. Ella buys some apples and then gives the same number to each of her friends. How many does she have left?

Let h be the number of apples Ella buys.

Let q be the number she gives to her friends.

Let f be the number of friends she has.

It should be: Let q be the number of apples she gives to each friend.

She has left.

**Assessment:**

Define variables and form an expression to answer the following questions.

1. Sven buys some chocolates from the shop. He eats some when she gets home. How many does he have left?
2. I buy some boxes of chocolates, each of which contains the same number of chocolates. How many chocolates do I have?
3. What would be a good start to form an expression to represent the following: Henry and Simon put all their coins in a pile. How many coins are there in the pile?
4. Let p be Henry’s coins.

Let q be Simon’s coins.

1. Let p be the weight of Henry’s coins.

Let q be the weight of Simon’s coins.

1. Let p be the number of coins Henry has.

Let q be the number of coins Simon has.

1. Let p and q be the number of coins altogether.

Let z be the weight of Henry’s coins.

What would be a good start to form an expression to represent the following:

In a pack of wolves, each wolf has many sharp teeth. How many sharp teeth are there in the pack of wolves?

1. Let d be the weight of the wolves.

Let c be their teeth.

1. Let d be the number of wolves.

Let c be the number of teeth that each wolf has.

1. Let d be the wolves.

Let c be the teeth.

1. Let d be the number of wolves.

Let c be the number of teeth.

A forest contains many trees. Some are burnt down in a forest fire. How many are left?

Let be the initial number of trees in the forest.

Let be the number that are burnt down.

Then the number left will be…

A

B

C

D

Aunt Rose shares some cans of cola amongst her nieces. How many does each receive?

Let be the number of cans of cola which Aunt rose starts with.

Let be the number of nieces she has.

Then each niece will receive…

A

B

C

D

I walk to the stadium, run round the track there, then walk home again. What distance have I covered?

Let be the distance from home to the stadium.

Let be the distance around the track.

Then the total distance will be…

A

B

C

D

CDs have been reduced from their original price by a certain amount in a sale. I buy some of these reduced CDs. How much do I spend?

Let be the original price of the CDs.

Let be the reduction in price.

Let be the number of CDs I buy.

Then the amount I spend will be…

A

B

C

D

My pet dog currently has a lot of hairs. He loses the same number of hairs every day. How many will he have left after a few days have passed?

Let be the current number of hairs my dog has.

Let be the number he loses each day.

Let be the number of days which pass.

Then the number of hairs left will be…

A

B

C

D

The Hotel Mathematica has a certain number of floors and a fixed number of rooms on each floor. Currently there are some guests staying. How many rooms are empty?

Let be the number of floors in the hotel.

Let be the number of rooms on each floor.

Let be the number of guests currently staying

Then the number of empty rooms will be…

A

B

C

D