

# Forming Equations

21 marks

1. Mr Smith owns minibuses and coaches.

Each minibus has 12 seats.

- (a) Write an expression, in terms of  $m$ , for the number of seats in  $m$  minibuses.

- (b)

.....

(1)

Each coach has 48 seats

- (b) Write an expression, in terms of  $m$  and  $c$ , for the number of seats in  $m$  minibuses and  $c$  coaches.

.....

(2)

(Total 3 marks)

2. Lisa packs pencils in boxes.

She packs 12 pencils in each box.

Lisa packs  $x$  boxes of pencils.

- (a) Write an expression, in terms of  $x$ , for the number of pencils Lisa packs.

.....

(1)

Lisa also packs pens in boxes.

She packs 10 pens into each box.

Lisa packs  $y$  boxes of pens.

- (b) Write down an expression, in terms of  $x$  and  $y$ , for the **total** number of pens and pencils Lisa packs.

.....

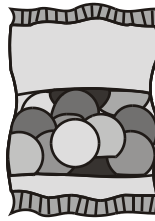
(2)

(Total 3 marks)

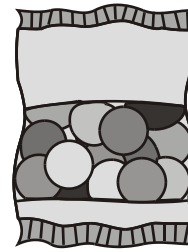
3. Audrey sells packets of sweets.  
There are three sizes of packets.



Small



Medium



Large

There are  $n$  sweets in the small packet.

There are twice as many sweets in the medium packet as there are in the small packet.

- (a) Write down an expression, in terms of  $n$ , for the number of sweets in the medium packet.

.....

(1)

There are 15 more sweets in the large packet than in the medium packet.

- (b) Write down an expression, in terms of  $n$ , for the number of sweets in the large packet.

.....

(1)

A small packet of sweets costs 20p.

Sebastian buys  $q$  small packets of sweets.

- (c) Write down an expression, in terms of  $q$ , for the cost in pence of the sweets.

..... pence

(1)

**(Total 3 marks)**

4. Jennifer made  $x$  cakes.  
She put 4 sweets on top of each cake.

(a) Write down an expression, in terms of  $x$ , for the number of sweets she used.

..... (1)

Paul made 3 more cakes than Jennifer.

(b) Write down an expression, in terms of  $x$ , for the number of cakes Paul made.

..... (1)

Paul also put 4 sweets on each of his cakes.

(c) Write down an expression, in terms of  $x$ , for the number of sweets Paul used.

..... (1)  
**(Total 3 marks)**

5. Jessica is paid £7 for each hour that she works.  
She works for  $y$  hours.

(a) Write down an expression, in terms of  $y$ , for the amount, in pounds (£), that Jessica is paid.

..... (1)

Lucy is also paid £7 for each hour that she works.  
She works for three times as many hours as Jessica.

(b) Write down an expression, in terms of  $y$ , for the amount, in pounds (£), that Lucy is paid.  
Give your answer as simply as possible.

..... (2)  
**(Total 3 marks)**

6. Andrew, Brenda and Callum each collect football stickers.

Andrew has  $x$  stickers.

Brenda has three times as many stickers as Andrew.

(a) Write down an expression for the number of stickers that Brenda has.

..... (1)

Callum has 9 stickers less than Andrew.

(b) Write down an expression for the number of stickers that Callum has.

..... (1)  
**(Total 2 marks)**

7. The cost, in pounds, of hiring a car can be worked out using this rule.

Add 3 to the number of days' hire Multiply your answer by 10
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(a) Work out the cost of hiring a car for 4 days.

£..... (2)

Bishen hired a car.

The cost was £120

(b) Work out the number of days for which Bishen hired the car.

..... (2)  
**(Total 4 marks)**