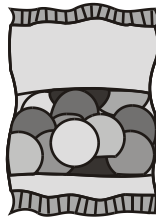


1. Audrey sells packets of sweets.  
There are three sizes of packets.



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)

2. 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
---

- (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)

3. 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)

4. Ben is  $n$  years old.

Colin is three years younger than Ben.

- (a) Write down an expression, in terms of  $n$ , for Colin's age.

.....

(1)

Daniel is twice as old as Ben.

- (b) Write down an expression, in terms of  $n$ , for Daniel's age.

.....

(1)

(Total 2 marks)

5. Eggs are sold in boxes.  
A small box holds 6 eggs.

Hina buys  $x$  small boxes of eggs.

Write down, in terms of  $x$ , the total number of eggs in these small boxes.

.....  
(Total 1 mark)

6. James packs books into boxes.  
He packs 20 books into each box.  
James packs  $x$  boxes of books.

Write an expression, in terms of  $x$ , for the number of books he packs.

.....  
(Total 1 mark)

7. Sofia has  $y$  wrist-bands.  
She gives 5 of these wrist-bands to her friend.

What is the expression, in terms of  $y$ , for the number of wrist-bands Sofia has now?

$5 - y$

$5y$

$y - 5$

$y + 5$

$\frac{y}{5}$

**A**

**B**

**C**

**D**

**E**

(Total 1 mark)

1. (a)  $2n$

*BI for  $2n$  or  $n + n$  OR  $2 \times n$  OR  $n \times 2$  OR  $n^2$*

1

- (b)  $2n + 15$  1  
*Bl for "2n" + 15 oe*
- (c)  $20q$  1  
*Bl cao*
- [3]**
2. (a)  $70$  2  
 $(4 + 3) \times 10$   
*M1 for  $(4 + 3) \times 10$*   
*A1 cao*
- (b)  $9$  2  
 $120 \div 10 - 3$   
*M1 for  $\frac{120}{10}$  or 12 seen eg  $12 \times 10 = 120$*   
*A1 cao*
- [4]**
3. (a)  $3x$  1  
*Bl cao Accept  $3 \times x, x^3, x \times 3, x + x + x$*
- (b)  $x - 9$  1  
*Bl for  $x - 9$  cao*
- [2]**
4. (a)  $n - 3$  1  
*Bl for  $n - 3$  or  $1n - 3$  or  $-3 + n$  (condone use of N)*
- (b)  $2n$  1  
*Bl for  $2n$  or  $n \times 2$  or  $2 \times n$  or  $n^2$  or  $n + n$  (condone use of N)*
- [2]**
5.  $6x$  1  
*Bl*
- [1]**

6.  $20x$ 

1

*B1 for  $20x$  (accept  $x20$  or  $20 \times x$  or  $x \times 20$ )**Ignore "anything" =  $20x$* *[Note:  $x = 20x$  gets B0]*

[1]

7. C

[1]

1. About a quarter of candidates gave entirely numerical answers to this question; most answers given were in terms of ' $n$ '. About half of candidates who sat the paper were able to give ' $2n$ ' or an acceptable equivalent (i. e. ' $2 \times n$ ', ' $n \times 2$ ' or ' $n2$ ') in answer to (a). About 25% of candidates wrote  $n = 2n$  and scored no marks. A significant minority of candidates were able to use their expression in (a) '+ 15' as their answer in part (b), although ' $n + 15$ ' was often seen. Part (c) was successfully answered by about a third of the candidates, and by some that had been unsuccessful in the previous two parts. Some candidates confused their answers by trying to include words or a 'p' (presumably for denoting pence) in their answers.

## 2. Specification A

The first part was well answered, usually without working. The most common wrong answers were 120 (multiplying 4 and 3, instead of adding them), 40 (failing to add 3 to 4 before multiplying by 10) and 280 (adding an extra stage of multiplication by 4). The second part was quite well answered, trial methods being employed more often than formal ones. One of the most common errors was to perform only the first inverse operation, that is  $120 \div 10$ , leading to an answer of 12, which scored one mark. The other was to carry out the inverse operations in the wrong order  $(120 - 3) \div 10 = 11$ .

## Specification B

It was encouraging to see that nearly  $\frac{3}{4}$  of the candidates were able to correctly apply a method in words and supply the correct answer of £70 to part (a). Candidates were less successful in part (b) where they had to apply the rule in reverse but nearly  $\frac{1}{2}$  were still able to work out that Bishen had hired a car for 9 days. Many of those who could not get that far were able to score the method mark for realising that reaching 12 was the first step.

**3. Specification A**

Algebra is not a well-understood topic at Foundation Tier and this question was no exception. Only 48% of candidates achieved the mark in part (a) and 32% in part (b). A common error in part (b) was to write the answer as “ $3x - 9$ ”

**Specification B**

Writing down an algebraic expression was generally dealt with successfully in both parts (a) and (b). The statement “three times as many stickers” being correctly written as  $3x$  and “nine stickers less” as  $x - 9$ .

The second part produced a variety of strange responses such as  $9 > x$  and  $-3^x$  with the most popular incorrect response being  $9 - x$ , but overall candidates were able to create the required expression.

4. It is heartening to report that very few candidates gave purely numerical answers to this question and few left the question unanswered. Incorrect answers seen to part (a) included  $n + 3$  and  $3n$ . Part (b) proved more of a challenge to weaker candidates.  $n^2$  was a commonly seen incorrect answer. The success rates in parts (a) and (b) were 64% and 53% respectively. The use of a capital letter N in candidates' responses was accepted.
5. Candidates at this level clearly find the writing of an algebraic expression a difficult concept to grasp, and this question was no exception. Many did not understand the words “in terms of  $x$ ” and gave the answer of 6. Others wrote  $x = 6$ . Hardly any candidates were able to correctly answer this question.
6. This showed an improvement and it was pleasing to see an answer of  $20x$  or equivalent regularly. Answers of  $20 \times x$  or similar gained full credit, but  $x = 20x$  did not.
7. No Report available for this question.