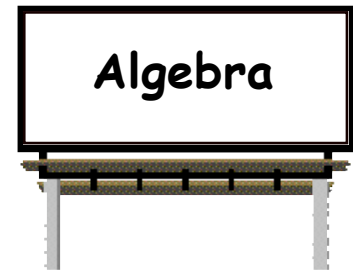


Chapter 7



Exercise 1

1. Copy each of the following and find what ? stands for each time :-

(a) $3 + ? = 8$

(b) $12 - ? = 9$

(c) $? \times 4 = 12$

$\Rightarrow ? = \dots$

$\Rightarrow ? = \dots$

$\Rightarrow ? = \dots$

2. Find the value of ? in each of the following :-

(a) $9 + ? = 17$

(b) $7 + ? = 7$

(c) $23 + ? = 32$

(d) $10 - ? = 9$

(e) $? - 5 = 10$

(f) $? - 16 = 10$

(g) $4 \times ? = 28$

(h) $? \times 7 = 42$

(i) $? \div 4 = 6$

3. In each of the following, the dots stand for +, -, x or \div .
Decide which symbol is needed each time here :-

(a) $7 \dots\dots 3 = 4$

(b) $14 \dots\dots 3 = 17$

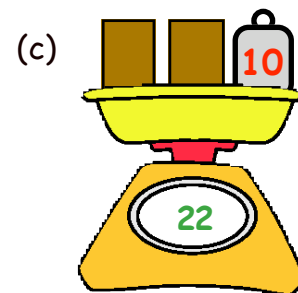
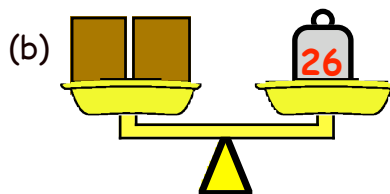
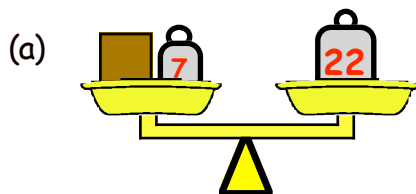
(c) $6 \dots\dots 2 = 12$

(d) $12 \dots\dots 3 = 4$

(e) $5 \dots\dots 1 = 5$

(f) $25 \dots\dots 5 = 5$

4. Look at the scales shown below and find the weight of each box :-



5. Use the signs +, -, x or \div to find :-

(a) 17 using all of the numbers (1, 3, 6)

(b) 23 using all of (1, 2, 3, 4)

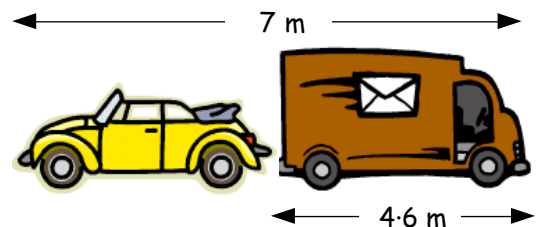
(c) 50 using all of (2, 2, 10, 15)

6. Form an equation and find the length of the car.

7. Gary and Bob weigh a total of 112 kilograms.
Gary weighs 61 kilograms.

(a) Make up an equation to show this information.

(b) Solve the equation to find Bob's weight.



Exercise 2

1. Copy each equation and solve it to find the value of x :-

(a) $x + 7 = 12$

(b) $x + 12 = 14$

(c) $11 + x = 23$

(d) $8 - x = 3$

(e) $x - 2 = 5$

(f) $x - 12 = 14$

(g) $4 \times x = 12$

(h) $5 \times x = 35$

(i) $20 \div x = 5$

2. Copy each of the following and find the missing values each time :-

(a) $y + 3 = 12$

(b) $p - 13 = 11$

(c) $6 \times k = 42$

(d) $w \div 6 = 6$

(e) $g \times 8 = 72$

(f) $w \div 10 = 20$

(g) $q \times 7 = 0$

(h) $36 \div h = 9$

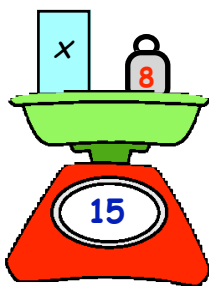
(i) $24 \div q = 1$

3. For each of the following :-

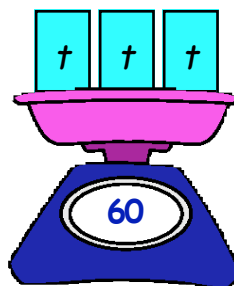
(i) make up an equation using the letter shown

(ii) solve the equation to find the value of the letter.

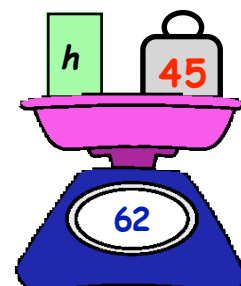
(a)



(b)



(c)



4. (a) Brad had some money in his pocket.
When he put a further £3.50 in his pocket he then had a total of £9.

Make up an equation and solve it to find how much money Brad had originally.



(b) Barry shared equally 24 sweets between himself and his three friends.

Make up an equation and solve it to find how many sweets each person will get.

Exercise 3

1. Look at the function machine.

(a) What comes out when you put in the number :-

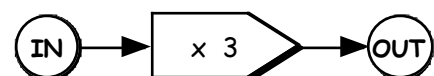
(i) 7

(ii) 10

(iii) 50

(iv) 1.2

(v) 0 ?



(b) What number must have been put in to produce the answer :-

(i) 6

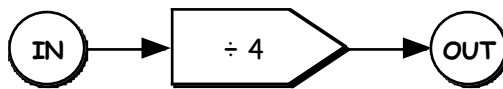
(ii) 30

(iii) 3000

(iv) 6.3

(v) 9 ?

2. Here is a new function machine.



(a) What comes out of this machine when you put in the number :-

- (i) 8 (ii) 20 (iii) 4 (iv) 28 (v) 4.8 ?

(b) What number must have been put in to produce the answer :-

- (i) 10 (ii) 30 (iii) 50 (iv) 1.2 (v) 1000 ?

3. The instructions on how long to cook a roast states :-

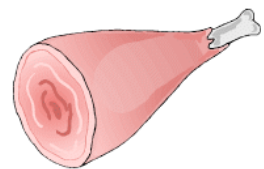
“ for each kilogram, cook for 1 hour, then add 1 hour”.

This can be shown in the table :-

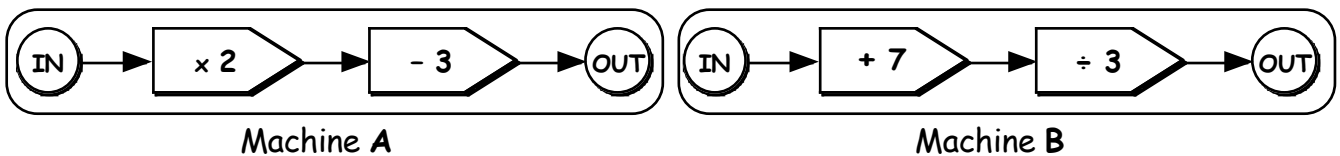
Weight (kg)	1	2	3	4	5	6
Time (hours)	2	3	...	...	...	...

(a) Copy the table and complete it.

(b) Copy and complete this function machine to show your rule.



4. Shown are two combined function machines.



What numbers come out of the machines when the following are put in :-

- (a) 5 in machine A (b) 2 in machine B (c) 10 in machine A
 (d) 14 in machine B (e) 50 in machine A (f) 29 in machine B ?

5. If the number 23 comes out of machine A in question 4, what number was put in ?

6. RENT-a-CABIN rent out cabins that cost £15 to hire plus £10 for each hire day.

(a) Copy and complete this table using a function machine to help you show "RENT-a-CABIN" charges.

No. of days hired	1	2	3	4	5	6
Total hire cost	...	£35	£45	...	...	...

(b) How much would it cost to hire a cabin for two weeks ?



Revision Exercise



1. What number does “?” stand for each time :-

- (a) $6 + ? = 11$ (b) $12 - ? = 4$ (c) $27 + ? = 36$ (d) $? - 12 = 11$
 (e) $21 \div ? = 7$ (f) $5 \times ? = 30$ (g) $? \times 7 = 42$ (h) $? \div 3 = 30$

2. Which symbol (+ - ÷ x) is missing in each of these :-

- (a) $6 \dots 2 = 8$ (b) $5 \dots 3 = 15$ (c) $17 \dots 12 = 5$ (d) $15 \dots 5 = 3$

3. Solve each equation :-

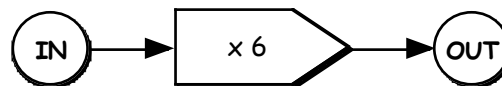
- (a) $x + 4 = 11$ (b) $y - 4 = 11$ (c) $h \times 4 = 24$ (d) $k \div 8 = 7$

4. Bob is 28 years old. Jenny is * years old.
 Jenny and Bob's combined age is 53.



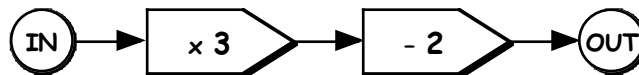
Make up an equation using * and solve it to find Jenny's age.

5. Look at the number machine.



- (a) What number comes out when 7 is put into the machine ?
 (b) What number was put in if 30 comes out of the machine ?

6. Look at this combined number machine.



- (a) What number comes out when 8 is put into the machine ?
 (b) What number was put in if 31 comes out of the machine ?

7. A bar stool has 4 legs.

No. stools	1	2	3	4	5	6
No. legs	4	8	...	...	...	...

- (a) Copy the table showing the total number of legs.
 (b) Make up a function machine to show how to calculate the number of legs, given the number of stools.



8. A Car Hire company charges £20, plus £10 per day.

No. Days	1	2	3	4
Cost (£)	£30	£40		

- (a) Copy and complete the table to show the total charges.
 (b) Make up a function machine to show how you would calculate the charges.
 (c) Use the function machine to find the total cost of car hire for two weeks.