

Equations

Instead of using "*" to represent a missing value, mathematicians tend to use letters instead. "x" is the most popular letter used by mathematicians.

Recognise and solve basic equations involving missing letters

Examples :-

$$\begin{aligned}x + 7 &= 13 \\ \Rightarrow x &= 6\end{aligned}$$

$$\begin{aligned}x - 7 &= 11 \\ \Rightarrow x &= 18\end{aligned}$$

$$\begin{aligned}2 \times x &= 26 \\ \Rightarrow x &= 13\end{aligned}$$

$$\begin{aligned}\frac{x}{10} &= 8 \\ \Rightarrow x &= 80\end{aligned}$$

Use the **cover up** method shown on page 91.

These are examples of what are called mathematical **equations**.

Exercise 3

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

a $x + 5 = 12$

b $x + 11 = 15$

c $8 + x = 23$

d $x + 9 = 9$

e $x - 7 = 3$

f $x - 15 = 1$

g $x - 8 = 8$

h $17 - x = 4$

i $23 - x = 9$

j $6 \times x = 30$

k $5 \times x = 45$

l $10 \times x = 70$

m $x \times 30 = 90$

n $\frac{x}{2} = 4$

o $\frac{x}{7} = 6$

p $x \div 8 = 8$

q $x \div 11 = 7$

r $64 \div x = 4$.

2. Though **x** is a firm favourite, any letter can be used to stand for a missing quantity.

Copy each of the following and find the missing value each time :-

a $p + 8 = 14$

b $q - 4 = 12$

c $3 \times r = 27$

d $\frac{s}{4} = 9$

e $t + 12 = 12$

f $g - 40 = 60$

g $h \times 8 = 32$

h $j \div 9 = 1$

i $1 \cdot 3 + k = 8 \cdot 3$

j $34 - m = 8$

k $9 \times n = 54$

l $56 \div v = 7$.

3. For each of the following :-

- make up an equation using the letter shown.
- solve the equation to find the value of the letter.

