

Changing word problems into symbols and numbers

Here are some **examples** of writing a formula from a word problem:

- a. If I think of a number, then add 5, I get 12. Write a formula to show this.

Let the number be called n

The formula is: $n + 5 = 12$

- b. Write a formula to show the total cost in pence (C) of a number of peppers (n) at 80p each.

The total cost in pence will be 80 times the number of peppers: $C = 80n$

Now have a go at turning these word problems into symbols and numbers:

1. If I think of a number, then add 8, I get 10. Write a formula to show this.
2. If I think of a number, then take away 5, I get 12. Write a formula to show this.
3. If I think of a number, then take away 3, I get 20. Write a formula to show this.
4. If I think of a number, then multiply it by 2, I get 12. Write a formula to show this.
5. If I think of a number, then multiply it by 5, I get 30. Write a formula to show this.
6. If I think of a number, then divide it by 2, I get 10. Write a formula to show this.
7. Write a formula to show the total cost in pence (C) of a number of bottles of lemonade (n) at 75p each.
8. Write a formula to show the total cost in pence (C) of a number of cans of beans (n) at 58p each.
9. I had some money in my purse when I went out. I spent £8 while I was out and then found I had £2 left. Write a formula to show how much money I had to start with?
10. Osborn had some money in his wallet when he went out. He spent £25 while he was out and then found he had £6 left. Write a formula to show how much money Osborn had to start with.

Now check your answers with the answer sheet.

With the 'think of number' questions (1-6) consider carrying on and working out the correct number after writing the formula. If working with a partner you could make up similar problems for each other to try to guess the number you're thinking of.