

Brackets and Factorising – Lesson 4

Welcome to today's lesson. Brackets and factorising are at the start of the N5 course because they are used in later topics. This means it is important that you can multiply out brackets quickly, confidently and get it right every time. To help you build up your skills we will do some more practice today.

Firstly, we learned how to multiply out two brackets when both contained plus signs.

Before you start this quick revision, to save yourself a little work, can you see two pairs of examples which will give the same answer?

1) $(x + 5)(x + 6)$

2) $(x + 6)(x + 5)$

3) $(x + 3)(x + 9)$

4) $(x + 3)(x + 8)$

5) $(x + 3)(x + 7)$

6) $(x + 3)(x + 5)$

7) $(x + 3)(x + 4)$

8) $(x + 2)(x + 9)$

9) $(x + 9)(x + 2)$

Remember we are multiplying so $(x + 3)(x + 4)$ will give the same answer as $(x + 4)(x + 3)$ just as 5×2 gives the same answer as 2×5 .

We have also learned how to cope with examples which include minus signs. If you are feeling a little worried about negative numbers, scroll back through the posts and have a look at yesterday's work.

Now try these examples: -

10) $(x - 5)(x - 6)$

11) $(x - 5)(x + 6)$

12) $(x + 5)(x - 6)$

13) $(x + 5)(x - 7)$

14) $(x - 5)(x - 7)$

15) $(x - 5)(x + 7)$

16) $(x + 6)(x - 7)$

17) $(x - 6)(x + 7)$

18) $(x - 6)(x - 7)$

19) $(x - 6)(x - 8)$

20) $(x + 6)(x - 8)$

21) $(x - 6)(x + 8)$

We also learned that $(x + 7)(x + 7)$ can be written as $(x + 7)^2$ because of course $(x + 7)(x + 7)$ means $(x + 7)$ **times** $(x + 7)$

Now try these examples:-

22) $(x + 2)^2$

23) $(x - 3)^2$

24) $(x + 4)^2$

25) $(x - 5)^2$

26) $(x + 6)^2$

27) $(x - 7)^2$

28) $(x + 8)^2$

29) $(x - 9)^2$

30) $(x + 10)^2$