

Investigating Expanding Double Brackets

1.	Find a pair of numbers that add to make +7 and multiply to make +10 +5 and +2	Expand and simplify $(x + 2)(x + 5)$ $= x^2 + 2x + 5x + 10$ $= x^2 + 7x + 10$
2.	Find a pair of numbers that add to make +11 and multiply to make +24 +8 and +3	Expand and simplify $(x + 3)(x + 8)$ $= x^2 + 3x + 8x + 24$ $= x^2 + 11x + 24$
3.	Find a pair of numbers that add to make +6 and multiply to make +8 +4 and +2	Expand and simplify $(x + 4)(x + 2)$ $= x^2 + 4x + 2x + 8$ $= x^2 + 6x + 8$
4.	Find a pair of numbers that add to make +5 and multiply to make -14 +7 and -2	Expand and simplify $(x + 7)(x - 2)$ $= x^2 + 7x - 2x - 14$ $= x^2 + 5x - 14$
5.	Find a pair of numbers that add to make +6 and multiply to make -27 +9 and -3	Expand and simplify $(x - 3)(x + 9)$ $= x^2 - 3x + 9x - 27$ $= x^2 + 6x - 27$
6.	Find a pair of numbers that add to make -7 and multiply to make -30 -10 and +3	Expand and simplify $(x - 10)(x + 3)$ $= x^2 - 10x + 3x - 30$ $= x^2 - 7x - 30$
7.	Find a pair of numbers that add to make -9 and multiply to make +20 -5 and -4	Expand and simplify $(x - 5)(x - 4)$ $= x^2 - 5x - 4x + 20$ $= x^2 - 9x + 20$
8.	Find a pair of numbers that add to make -10 and multiply to make +16 -8 and -2	Expand and simplify $(x - 2)(x - 8)$ $= x^2 - 2x - 8x + 16$ $= x^2 - 10x + 16$

What do you notice? **The two numbers that are the answers to the add/multiply problems are the two numbers in the double brackets. The sum of the numbers is the x term and the product of the numbers is the constant term.**