Expanding Double Brackets

Skill 1

1) $(x + 7)(x + 2)$
2) $(x + 6)(x + 4)$
3) $(x + 5)(x + 9)$
4) $(x + 7)(x + 8)$
5) $(x + 3)^2$
6) $\left(x + \frac{1}{2}\right)\left(x + \frac{1}{4}\right)$
7) $(x + 0.2)(x + 0.4)$

Skill 2

1) $(x + 5)(x - 2)$
2) $(x - 9)(x + 4)$
3) $(x - 5)(x + 8)$
4) $(x + 7)(x - 6)$
5) $(x - 3)(x + 7)$
6) $\left(x - \frac{1}{2}\right)\left(x + \frac{1}{2}\right)$
7) $(x + 0.3)(x - 0.6)$

Skill 3

1) $(x - 3)(x - 5)$
2) $(x - 7)(x - 4)$
3) $(x - 5)(x - 6)$
4) $(x - 9)(x - 8)$
5) $(x - 3)(x - 2)$
6) $\left(x - \frac{1}{4}\right)\left(x - \frac{1}{4}\right)$
7) $(x - 0.3)(x - 0.5)$

Skill 4

1) $(x + 4)(x - 2)$
2) $(x + 6)(x + 3)$
3) $(x - 7)(x - 9)$
4) $(x - 2)(x - 8)$
5) $(x - 4)(x + 6)$
6) $\left(x + \frac{1}{4}\right)\left(x + \frac{3}{4}\right)$
7) $(x - 0.4)(x - 0.9)$

Stretch 1

1) $(2x + 4)(x - 7)$
2) $(x + 2)(3x + 3)$
3) $(4x - 6)(x - 9)$
4) $(5x - 6)(2x + 3)$
5) $(3x - 7)(2x + 6)$
6) $\left(3x + \frac{1}{5}\right)\left(x - \frac{2}{5}\right)$
7) $(7x - 0.6)(3x - 0.2)$

Memory

When expanding double brackets there are a few methods you can use. Choose the one that suits you.

Smiley Face

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

$= x^2 + 12 + 3x + 4x$
$= x^2 + 7x + 12$

Grid Method

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

	x	$+ 5$
x	x^2	$+5x$
$+ 7$	$+7x$	$+35$

$= x^2 + 12x + 35$

Double Claw / FOIL

F - Firsts
O - Outers
I - Inners
L - Lasts

$(x + 2)(x + 3)$

$= x^2 + 3x + 2x + 6$
$= x^2 + 5x + 6$

Stretch 2

Write an expression for the area of these shapes.

$3x - 4$, $2x + 5$

$5x - 2$, $2x - 3$