1.2) Expanding brackets

Worked example	Your turn
Expand and simplify: $$(3x - 5y)(x - 4y + 2)$$	Expand and simplify: $$(5x - 3y)(2x - y + 4)$$ $$10x^2 - 11xy + 20x + 3y^2 - 12y$$

Worked example	Your turn
Expand and simplify: $$x^2(3x-5y)(x-4y+2)$$	Expand and simplify: $$x(5x-3y)(2x-y+4)$$ $$10x^3 - 11x^2y + 20x^2 + 3xy^2 - 12xy$$

Worked example	Your turn
Expand and simplify: $$(2x - 5)^3$$	Expand and simplify: $$(4x - 7)^3$$ $$64x^3 - 336x^2 + 588x - 343$$

Worked example	Your turn
Expand:	Expand:
$(2x + 3)(4x + 5)$	$(3a + 5)(2a + 4)$
	$6a^2 + 22a + 20$
$(5x + 3)(4x + 1)$	

Worked example	Your turn
Expand: $$(x + 3)^2$$	Expand: $$(x + 5)^2$$ $$\color{red}{x^2 + 10x + 25}$$
$$(x + 4)^2$$	

Worked example	Your turn
Expand:	Expand:
$(x-3)^2$	$(x-5)^2$
	$x^2 - 10x + 25$
$(x-4)^2$	

Worked example	Your turn
Expand: $$(4x + 3)(4x - 3)$$	Expand: $$(3x + 5)(3x - 5)$$ $$\textcolor{red}{9x^2 - 25}$$
$$(5x + 4)(5x - 4)$$	

Worked example	Your turn
Expand: $(3x + 4)^2$ $(5x + 6)^2$	Expand: $(4x + 5)^2$ $16x^2 + 40x + 25$

Worked example	Your turn
Expand:	Expand:
$(3x - 4)^2$	$(4x - 5)^2$
	$16x^2 - 40x + 25$
$(5x - 6)^2$	

Worked example	Your turn
Expand:	Expand:
$(4 - 3x)^2$	$(5 - 4x)^2$
	$16x^2 - 40x + 25$
$(6 - 5x)^2$	

Worked example	Your turn
Expand: $$(3x + 2y)^2$$	Expand: $$(5x + 4y)^2$$ $$25x^2 + 40xy + 16y^2$$
$$(4x + 3y)^2$$	

Worked example	Your turn
Expand:	Expand:
$2(4x + 3)(5x - 6)$	$4(5x + 6)(3x - 2)$
	$60x^2 + 32x - 48$
$3(7x + 2)(8x - 5)$	

Worked example	Your turn
Expand: $2x(4x + 3)(5x - 6)$	Expand: $4x^2(5x + 6)(3x - 2)$ $\textcolor{red}{60x^4 + 32x^3 - 48x^2}$
$3x^2(7x + 2)(8x - 5)$	

Worked example	Your turn
Expand: $(x + 5)(x + 6)(x + 7)$	Expand: $(x + 2)(x + 3)(x + 4)$ $x^3 + 9x^2 + 26x + 24$

Worked example	Your turn
Expand: $(2x + 5)(3x + 6)(4x + 7)$	Expand: $(3x + 2)(4x + 6)(5x + 7)$ $60x^3 + 214x^2 + 242x + 84$

Worked example	Your turn
Expand: $(x + 5)(x - 6)(x - 7)$	Expand: $(x + 2)(x - 3)(x - 4)$ $x^3 - 5x^2 - 2x + 24$

Worked example	Your turn
Expand: $$(x-5)(x-6)(x-7)$$	Expand: $$(x-2)(x-3)(x-4)$$ $$x^3 - 9x^2 + 26x - 24$$

Worked example	Your turn
Expand: $$(x + 5)(x + 6)^2$$	Expand: $$(x + 2)(x + 3)^2$$ $$\color{red}{x^3 + 8x^2 + 21x + 18}$$

Worked example	Your turn
Expand: $$(x-5)(x-6)^2$$	Expand: $$(x-2)(x-3)^2$$ $$x^3 - 8x^2 + 21x - 18$$

Worked example	Your turn
Expand: $$(x + 5)^3$$	Expand: $$(x + 4)^3$$ $$x^3 + 12x^2 + 48x + 64$$
$$(x + 6)^3$$	

Worked example	Your turn
Expand:	Expand:
$(x-5)^3$	$(x-4)^3$
	$x^3 - 12x^2 + 48x - 64$
$(x-6)^3$	

Worked example	Your turn
Expand: $$(5 - 2x)(3x - 4)^2$$	Expand: $$(7 - 3x)(4x - 5)^2$$ $$-48x^3 + 232x^2 - 355x + 175$$