

Fill in the Blanks

Expanding Three Brackets

Question	Multiply first two brackets			Simplify first two brackets	Multiply by third bracket				Simplified Answer
$(x + 2)(x + 1)(x + 5)$	$\times$	x	$+2$	$x^2 + 3x + 2$	$\times$	x^2	$+3x$	$+2$	$x^3 + 8x^2 + 17x + 10$
	x	x^2	$+2x$		x	x^3	$+3x^2$	$+2x$	
	$+1$	$+x$	$+2$		$+5$	$+5x^2$	$+15x$	$+10$	
$(y + 4)(y - 2)(y + 3)$	$\times$	y	$+4$	$y^2 + 2y - 8$	$\times$	y^2	$+2y$	-8	$y^3 + 5y^2 - 2y - 24$
	y	y^2	$+4y$		y	y^3	$+2y^2$	$-8y$	
	-2	$-2y$	-8		$+3$	$+3y^2$	$+6y$	-24	
$(b - 3)(b - 5)(b - 6)$	$\times$	b	-3	$b^2 - 8b + 15$	$\times$	b^2	$-8b$	$+15$	$b^3 - 14b^2 + 63b - 90$
	b	b^2	$-3b$		b	b^3	$-8b^2$	$+15b$	
	-5	$-5b$	$+15$		-6	$-6b^2$	$+48b$	-90	
$(2x + 3)(x - 4)(x + 2)$	$\times$	$2x$	$+3$	$2x^2 - 5x - 12$	$\times$	$2x^2$	$-5x$	-12	$2x^3 - x^2 - 22x - 24$
	x	$2x^2$	$+3x$		x	$2x^2$	$-5x^2$	$-12x$	
	-4	$-8x$	-12		$+2$	$+4x^2$	$-10x$	-24	
$(2a - 1)(3a + 1)(a - 2)$	$\times$	$2a$	-1	$6a^2 - a - 1$	$\times$	$6a^2$	$-a$	-1	$6a^3 - 13a^2 + a + 2$
	$3a$	$6a^2$	$-3a$		a	$6a^3$	$-a^2$	$-a$	
	$+1$	$+2a$	-1		-2	$-12a^2$	$+2a$	$+2$	