Core skills worksheet

Factorising trinomials

National 5 Maths

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1. Factorise each expression. In these questions, the x^2 term always has a coefficient of 1.

(a) x^2+3x+2	**(b)** x^2+5x+6	**(c)** x^2+6x+8	**(d)** x^2+9x+8
(e) $x^2-8x+15$	**(f)** x^2-7x+6	**(g)** x^2-5x+6	**(h)** $x^2-7x+12$
(i) $x^2+3x-10$	**(j)** $x^2+5x-14$	**(k)** $x^2+5x-24$	**(l)** $x^2+3x-28$
(m) x^2-8x-9	**(n)** $x^2-4x-12$	**(o)** x^2-x-12	**(p)** $x^2-5x-24$
(q) x^2+6x+9	**(r)** $x^2-10x+25$	**(s)** $x^2-9x-10$	**(t)** $x^2-4x-21$
(u) $x^2-12x+27$	**(v)** x^2+x-30	**(w)** $x^2+9x-36$	**(x)** $x^2-2x-24$

2. Factorise each expression. The coefficient of the x^2 term isn't 1 but all of the signs are +.

(a) $2x^2+5x+3$	**(b)** $3x^2+7x+2$	**(c)** $2x^2+7x+5$	**(d)** $2x^2+7x+3$
(e) $3x^2+11x+6$	**(f)** $5x^2+9x+4$	**(g)** $2x^2+13x+15$	**(h)** $4x^2+9x+2$
(i) $6x^2+7x+2$	**(j)** $15x^2+28x+5$	**(k)** $35x^2+22x+3$	**(l)** $6x^2+23x+7$
(m) $4x^2+21x+5$	**(n)** $4x^2+8x+3$	**(o)** $9x^2+18x+8$	**(p)** $12x^2+16x+5$
(q) $10x^2+31x+3$	**(r)** $20x^2+9x+1$	**(s)** $4x^2+12x+9$	**(t)** $6x^2+23x+21$
(u) $15x^2+26x+8$	**(v)** $9x^2+24x+16$	**(w)** $8x^2+38x+9$	**(x)** $10x^2+17x+6$

3. Factorise each expression. The coefficient of x^2 isn't 1 and there is a mixture of + and – signs.

(a) $2x^2+x-3$	**(b)** $3x^2-10x+8$	**(c)** $5x^2-23x-10$	**(d)** $2x^2+3x-20$
(e) $4x^2-8x+3$	**(f)** $8x^2+2x-3$	**(g)** $9x^2-30x+25$	**(h)** $6x^2-5x+1$
(i) $15x^2-16x+4$	**(j)** $6x^2-11x-7$	**(k)** $8x^2-6x-5$	**(l)** $5x^2-36x+36$
(m) $12x^2+7x-12$	**(n)** $2x^2+7x-72$	**(o)** $4x^2-x-14$	**(p)** $24x^2+x-10$
(q) $6x^2-35x-6$	**(r)** $15x^2+4x-4$	**(s)** $12x^2+16x-3$	**(t)** $8x^2-26x+15$
(u) $2x^2+7x-49$	**(v)** $6x^2-19x+15$	**(w)** $12x^2-52x-9$	**(x)** $9x^2-27x+8$

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