

Factorising Quadratics — Practice

A • Factorising $x^2 + bx + c$

YOU DO

1 Factorise $x^2 + 10x + 21$

2 Factorise $x^2 - 11x + 28$

3 Factorise $x^2 + 5x - 36$

4 Factorise $x^2 - x - 42$

FLUENCY • FACTORISE FULLY

a $x^2 + 6x + 8$

b $x^2 + 11x + 24$

c $x^2 - 7x + 12$

d $x^2 - 10x + 16$

e $x^2 + 2x - 15$

f $x^2 - 4x - 21$

g $x^2 + x - 56$

h $x^2 - 13x + 36$

i $x^2 + 14x + 49$

j $x^2 - 3x - 54$

k $x^2 + 20x + 96$

l $x^2 - x - 72$

B • Common factors and the difference of two squares

YOU DO

1 Factorise $5x^2 + 5x - 30$

2 Factorise $x^2 - 81$

3 Factorise $16x^2 - 1$

4 Factorise $2x^2 - 50$

FLUENCY • FACTORISE FULLY

a $x^2 - 7x$

b $x^2 - 64$

c $4x^2 - 9$

d $4x^2 + 12x + 8$

e $3x^2 - 27$

f $25 - x^2$

g $100x^2 - 49$

h $2x^2 + 6x - 56$

i $x^4 - 16$ (stretch)

C • Factorising $ax^2 + bx + c$

YOU DO

1 Factorise $2x^2 + 11x + 12$

2 Factorise $3x^2 - 14x + 8$

3 Factorise $5x^2 + 13x - 6$

4 Factorise $6x^2 + 7x - 3$

FLUENCY · FACTORISE FULLY

a $2x^2 + 5x + 2$

b $3x^2 + 7x + 2$

c $2x^2 - 9x + 4$

d $5x^2 + 9x - 2$

e $3x^2 - x - 10$

f $4x^2 + 8x + 3$

g $6x^2 - 7x + 2$

h $10x^2 + x - 3$

i $12x^2 - 5x - 2$

D · Solving quadratics by factorising

YOU DO

1 Solve $x^2 + 2x - 35 = 0$

2 Solve $x^2 - 9x = 0$

3 Solve $2x^2 - 7x + 3 = 0$

4 Solve $x^2 = 5x + 14$

FLUENCY · SOLVE

a $x^2 + 7x + 10 = 0$

b $x^2 - x - 30 = 0$

c $x^2 - 36 = 0$

d $2x^2 + 9x + 4 = 0$

e $3x^2 - x - 4 = 0$

f $x^2 + 6x = 16$

Mixed practice · factorise fully

a $x^2 + 12x + 35$

b $x^2 - 121$

c $2x^2 + 3x - 5$

d $7x^2 - 21x$

e $x^2 - 16x + 64$

f $3x^2 + 3x - 36$

g $9x^2 - 12x + 4$

h $4x^2 - 11x - 3$

i $2x^2 - 32$

j $6x^2 + 11x + 3$

k $8x^2 - 2$

l $15x^2 + x - 2$