1.3) Factorising

Worked example	Your turn
Factorise: $21x^4 + 29x^3 - 10x^2$	Factorise: $10x^3 + 29x^2 - 21x$ $x(5x - 3)(2x + 7)$

Worked example	Your turn
Factorise: $x^3 - x$	Factorise: $x^3 - x$ $x(x-1)(x+1)$

Worked example	Your turn
Factorise:	Factorise:
$x^2 + 4x$	$3x^2 - 12x$
	$3x(x - 4)$
$x^2 - 6x$	
$2x^2 - 6x$	

Worked example	Your turn
Factorise:	Factorise:
$x^2 + x - 2$	$x^2 - x - 20$
$x^2 - x - 2$	$(x - 5)(x + 4)$
$x^2 - x - 6$	
$x^2 + x - 12$	

Worked example	Your turn
Factorise: $2x^2 - 13x + 15$	Factorise: $3x^2 - 11x + 10$ $(3x - 5)(x - 2)$
$3x^2 - 17x + 10$	

Worked example	Your turn
Factorise: $2x^2 + 2x - 12$ $3x^2 - 12x - 15$	Factorise: $5x^2 - 15x + 10$ $5(x - 2)(x - 1)$

Worked example	Your turn
Factorise:	Factorise:
$3x^2 + 10x + 3$	$5x^2 + 8x + 3$ $(5x + 3)(x + 1)$
$3x^2 + 10x + 8$	$5x^2 + 16x + 12$ $(5x + 6)(x + 2)$
$3x^2 + 14x + 8$	$5x^2 + 32x + 12$ $(5x + 2)(x + 6)$

Worked example	Your turn
Factorise: $(x^2 - y^2) - (x - y)^2$	Factorise: $(n^2 - a^2) - (n - a)^2$ $2a(n - a)$

Worked example	Your turn
Factorise: $(x+y)^2+(x+y)(2x+5y)$ $(a+b)^2-(a+b)(2a-3b)$	Factorise: $(p+q)^2+(p+q)(4p+9q)$ $5(p+q)(p+2q)$

Worked example	Your turn
Factorise:	Factorise:
$a^2 - 9$	$c^2 - 25$
	$(c + 5)(c - 5)$
$b^2 - 16$	

Worked example	Your turn
Factorise:	Factorise:
$9 - x^2$	$25 - x^2$
	$(5 + x)(5 - x)$
$16 - x^2$	

Worked example	Your turn
Factorise: $2x^2 - 18$ $3x^2 - 48$	Factorise: $4x^2 - 100$ $4(x + 5)(x - 5)$

Worked example	Your turn
Factorise: $4x^2 - 9$	Factorise: $25x^2 - 36$ $(5x + 6)(5x - 6)$
$9x^2 - 16$	

Worked example	Your turn
Factorise:	Factorise:
$9x^2 - 1$	$25x^2 - 1$
	$(5x + 1)(5x - 1)$
$1 - 16x^2$	

Worked example	Your turn
Factorise: $9x^2 - y^2$	Factorise: $16c^2 - d^2$
	$(4c + d)(4c - d)$
$a^2 - 25b^2$	

Worked example	Your turn
Factorise: $4x^2 - 9y^2$ $9x^2 - 16y^2$	Factorise: $25x^2 - 36y^2$ $(5x + 6y)(5x - 6y)$

Worked example	Your turn
Factorise: $5m^2 - 20p^2$	Factorise: $50a^2 - 72b^2$ $2(5a + 6b)(5a - 6b)$
$32x^2 - 98y^2$	

Worked example	Your turn
Factorise:	Factorise:
$x^4 - 1$	$x^{10} - 49$
	$(x^5 + 7)(x^5 - 7)$
$x^6 - 16$	
$x^8 - 25$	

Worked example	Your turn
Factorise: $4x^4 - 9y^2$ $9x^8 - 16y^6$	Factorise: $25x^{12} - 36y^6$ $(5x^6 + 6y^3)(5x^6 - 6y^3)$

Worked example	Your turn
Factorise: $x^3 - 8$	Factorise: $x^3 - 1$ $(x-1)(x^2+x+1)$