

Further Factoring

Perfect Square Trinomials → $(2x+3)(2x+3)$

think:
1, 4, 9, 16, 25, 36
49, 64, 81, 100...

$$4x^2 + 6x + 6x + 9$$

always 2
identical terms

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

must both be perfect

Product & Sum Pattern - (trinomials)

x^2	x	#
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Can be extended to higher powers

x^4	x^2	#	(x^2)	(x^2)
x^6	x^3	#		
x^8	x^4	#		

Ex. $1.8 \leftarrow 8x^4 + 10x^2 - 3 \rightarrow 1.3$

Anything common? NO

Trinomial → pattern? Yes

$$(2x^2 + 3)(4x^2 - 1)$$

2 terms difference of squares?

$$(2x^2 + 3)(4x^2 - 1)$$

conjugates

$$(2x^2 + 3)(2x - 1)(2x + 1)$$

* Because there are still exponents → need to check if more factoring