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Factorisation

Student Worksheet

Questions & Working Space

IGCSE Mathematics

Name: _____

Date: _____

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Note

How to use this worksheet. These questions are built *strictly* on the *Factorisation* notes: taking out a common factor (numerical and algebraic), factorising by grouping, quadratics of the form $x^2 + bx + c$, quadratics of the form $ax^2 + bx + c$ (splitting the middle term), the difference of two squares, perfect square trinomials, solving equations by factorisation, and choosing the correct method when a question simply says "factorise completely".
Working space. Ruled lines are provided after each question — show *all* of your working there. Always check a factorisation by expanding it back out, and always take out a common factor *before* trying any other method.
Checking your answers. Full step-by-step solutions, a marking scheme for the exam paper, and a quick answer key are in the separate booklet *"Factorisation — Solutions & Answer Key."* Try each question honestly before you look.

1 Part I — Topic-by-Topic Exercises

1.1 Taking Out a Common Factor

Exercise CF1 *[Basic]*

Factorise $8x + 20$.

Exercise CF2 *[Basic]*

Factorise $12y - 18$.

Exercise CF3 *[Basic]*

Factorise $6a + 15b + 27$.

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Exercise CF4 *[Standard]*

Factorise $x^2 + 6x$.

Exercise CF5 *[Standard]*

Factorise $10p^3 - 25p^2$.

Exercise CF6 *[Standard]*

Factorise $14m^2n + 21mn^2$.

Exercise CF7 *[Intermediate]*

Factorise $20a^3b^2 - 30a^2b^3 + 50a^2b^2$.

Hint

Deal with the numbers and each letter separately: find the HCF of 20, 30 and 50, then take the *lowest* power of a that appears in every term, and do the same for b.

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Preview ends here

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