

# The Panda Math Tutor

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## Factorisation

Student Worksheet  
Questions & Working Space  
IGCSE Mathematics

Name: \_\_\_\_\_

Date: \_\_\_\_\_

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Teach → Practice → Reason → Apply → Challenge → Master

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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.

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## 1 Part I — Topic-by-Topic Exercises

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### 1.1 Taking Out a Common Factor

**Exercise CF1 [Basic]**

Factorise  $8x + 20$ .

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**Exercise CF2 [Basic]**

Factorise  $12y - 18$ .

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**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  $b$ .

## Preview ends here

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Factorisation — Worksheet — €11.99

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