

The Panda Math Tutor

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Linear Simultaneous Equations

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 *Linear Simultaneous Equations* notes: the substitution method, the elimination method, the graphical method, equations needing rearrangement or clearing of fractions, forming equations from word problems, and the two special cases (no solution and infinitely many solutions).

Set your working out properly. Label your equations (1) and (2) from the start, state clearly what you are doing at each step (“ $(2) \times 3$ ”, “ $(1) + (3)$ ”), and **always find both unknowns**. Finish every question by checking your pair of values in *both* original equations.

Working space. Ruled lines are provided after each question — show *all* of your working there. Harder questions have a teal **Hint** box; try the question first and use the hint only if you are stuck.

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 “*Linear Simultaneous Equations — Solutions & Answer Key*.” Try each question honestly before you look.

1 Part I — Topic-by-Topic Exercises

1.1 The Substitution Method

Exercise SUB1 [*Basic*]

Solve by substitution:

$$\begin{cases} y = 2x + 3 & (1) \\ x + y = 12 & (2) \end{cases}$$

Exercise SUB2 *[Basic]*

Solve by substitution:

$$\begin{cases} y = 5 - x & (1) \\ 3x + y = 11 & (2) \end{cases}$$

Exercise SUB3 *[Standard]*

Solve by substitution:

$$\begin{cases} x + y = 9 & (1) \\ 4x - y = 21 & (2) \end{cases}$$

Exercise SUB4 *[Standard]*

Solve by substitution:

$$\begin{cases} 3x + y = 17 & (1) \\ 2x - 3y = 15 & (2) \end{cases}$$

Preview ends here

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