# The Panda Math Tutor

www.thepandamathtutor.com

# Linear Simultaneous Equations

## Student Worksheet

Questions & Working Space

IGCSE Mathematics

Name: _____

Date: _____

The Panda Math Tutor

Prepared by

**Nikolas Agisilaou**

# Contents

**1 Part I — Topic-by-Topic Exercises** **2**
1.1 The Substitution Method . . . . . 2
1.2 The Elimination Method . . . . . 6
1.3 The Graphical Method . . . . . 10
1.4 Rearrangement and Fractional Coefficients . . . . . 15
1.5 Word Problems . . . . . 19
1.6 Special Cases . . . . . 23

**2 Part II — Mixed Review** **26**

**3 Part III — Examination-Style Practice** **31**

The Panda Math Tutor

**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) × 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:

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

The Panda Math Tutor

**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:

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

The Panda Math Tutor

# Preview ends here

32 more pages are in the full pack.

Linear Simultaneous Equations — Worksheet — €11.99

Buy the pack and the complete PDF lands in your inbox.

Personal study use only — please don't resell or share.