

The Panda Math Tutor

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Rearranging Formulas

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 *Rearranging Formulas* notes: the subject of a formula, the balance principle, inverse operations, one-step and multi-step rearrangements, powers and roots, fractions, formulas where the subject appears more than once, harder rearrangements, and real-world applications.

Working space. Ruled lines are provided after each question — show *all* of your working there, write one rearrangement per line, and state the inverse operation you are using. Harder questions have a teal **Hint** box; try the question first and use the hint only if you are stuck.

Always check. Substitute your answer back into the original formula, or work backwards, to confirm it. This single habit catches almost every sign error.

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 “*Rearranging Formulas — Solutions & Answer Key*.” Try each question honestly before you look.

1 Part I — Topic-by-Topic Exercises

1.1 The Subject of a Formula and Inverse Operations

Exercise E1 *[Basic]*

Write down the subject of each formula:

(a) $d = st$ (b) $u = v - at$ (c) $L = 4s$ (d) $k = \frac{p}{q}$

Exercise E2 *[Basic]*

Write down the inverse of each operation:

(a) adding 9 (b) dividing by 7 (c) squaring (d) taking a cube root

Exercise E3 *[Standard]*

For the formula $y = 4x + 1$:

- (a) Describe, in order, the two operations that are applied to x .
 - (b) Write down the two inverse operations, in the order you would use them to make x the subject.
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Exercise E4 *[Standard]*

A student rearranges $T = k - 6$ and writes $k = T - 6$. Identify the error and give the correct rearrangement.

Exercise E5 *[Intermediate]*

Both sides of the formula $R = 4a + 8b$ are divided by 4. Explain why the result is $\frac{R}{4} = a + 2b$ and **not** $\frac{R}{4} = a + 8b$.

Preview ends here

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