# Rearranging Formulae

IGCSE Maths · Grades 9–10 · British and American curriculum · About 25 minutes · 8 questions

Name _____ Date _____ Score / 8

**WHAT YOU WILL PRACTISE**

- Change the subject of a formula in one or two steps
- Rearrange formulae that contain fractions
- Rearrange a formula where the subject is squared

**WORKED EXAMPLE**

Make x the subject of $y = 2x + 9$.

1. Subtract 9 from both sides: $y - 9 = 2x$.
2. Divide both sides by 2: $(y - 9)/2 = x$.
3. Write it with x on the left: $x = (y - 9)/2$.

**Answer:** $x = (y - 9)/2$

## Questions

Show your working in the space under each question.

**1.** Make x the subject of $y = x + 7$

**2.** Make x the subject of $y = 4x$

**3.** Make x the subject of $y = 3x - 5$

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**4.** Make t the subject of $v = u + at$

**5.** Make r the subject of $C = 2\pi r$

**6.** Make x the subject of $y = x/5 + 2$

**7.** Make b the subject of $A = \frac{1}{2}bh$

**8.** Make x the subject of $y = x^2 + 4$, where x is positive

# Answers: Rearranging Formulae

Mark your own work, then go back to any question you got wrong before reading the tutor tip.

| Q | QUESTION | ANSWER |
|---|---|---|
| 1 | Make x the subject of y = x + 7 | **x = y − 7** |
| 2 | Make x the subject of y = 4x | **x = y/4** |
| 3 | Make x the subject of y = 3x − 5 | **x = (y + 5)/3** |
| 4 | Make t the subject of v = u + at | **t = (v − u)/a** |
| 5 | Make r the subject of C = 2πr | **r = C/(2π)** |
| 6 | Make x the subject of y = x/5 + 2 | **x = 5(y − 2)** |
| 7 | Make b the subject of A = ½bh | **b = 2A/h** |
| 8 | Make x the subject of y = $x^2$ + 4, where x is positive | **x = √(y − 4)** |

**TUTOR TIP**

Undo the operations in reverse order, doing the same thing to both sides, exactly as you would when solving an equation.

**Stuck on a question? Work through it live with a tutor.**

YFCampus offers one-to-one online Maths tutoring matched to your school curriculum. Book a free trial class at **www.yfcampus.com/kw**

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