Rearranging Formulae

GCSE Maths · Foundation and Higher tier · Grades 5–7 · 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.

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