

Questions: Introduction to rearranging equations

Shanelle Advani, Tom Coleman

Summary

A selection of questions for the study guide on introduction to rearranging equations.

Before attempting these questions, it is highly recommended that you read [Guide: Introduction to rearranging equations](#).

Q1

For each of the following equations, rearrange the equation for the variable given.

- 1.1. Rearrange $x = a + 2b$ for a .
- 1.2. Rearrange $x = a + 2b$ for b .
- 1.3. Rearrange $x - 2y + 4z = 4$ for z .
- 1.4. Rearrange $5x - 3y + 8z = -2$ for x .
- 1.5. Rearrange $5x - 3y + 8z = -2$ for y .
- 1.6. Rearrange $5x - 3y + 8z = -2$ for z .
- 1.7. Rearrange $x^2 + y^2 = 4$ for x .
- 1.8. Rearrange $\frac{x^2}{4} + \frac{y^2}{16} = a$ for x .
- 1.9. Rearrange $\frac{x^2}{4} + \frac{y^2}{16} = a$ for y .
- 1.10. Rearrange $\sqrt{x^2 - a^2} = y + 1$ for x .
- 1.11. Rearrange $\sqrt[3]{x^3 - a^3} = y + 1$ for a .
- 1.12. Rearrange $\sqrt[3]{x^3 - a^3} = y + 1$ for x .
- 1.13. Rearrange $x^4y^2 = a^3 + 2bcd$ for d .
- 1.14. Rearrange $x^4y^2 = a^3 + 2bcd$ for a .
- 1.15. Rearrange $x^4y^2 = a^3 + 2bcd$ for x .
- 1.16. Rearrange $\frac{1}{x} + 45 = ly^2$ for x .

Q2

In [Guide: Introduction to rearranging equations](#), you saw the expression

$$5x^3y^3 + \frac{6z}{w^4} = 4abc^2$$

where you rearranged this equation for x .

Rearrange this expression for every other variable a, b, c, y, z, w .

[After attempting the questions above, please click this link to find the answers.](#)

Version history and licensing

v1.0: initial version created 08/23 by Shanelle Advani and tdhc as part of a University of St Andrews STEP project.

- v1.1: edited 05/24 by tdhc.

[This work is licensed under CC BY-NC-SA 4.0.](#)