

A Level Mathematics – Preparatory Work 2025

This piece of work should be completed before your first lesson; it will help prepare you for the first week of the Mathematics course. It is a worksheet that covers basic manipulation of algebra and comes from a GCSE to A Level transitional set of work, which is a resource we use to support students struggling with the essential algebraic basis of the course. [<https://alevelmathsrevision.com/bridging-the-gap/>] is a good source of additional practice work you can do to help you bridge the gap from GCSE to A Level Mathematics].

bring your completed work to the first lesson, which will be marked by your teacher.

1. Rearrange $a(q - c) = d$ to make q the subject
2. Make n the subject of the formula $m = 5n - 21$
3. Make p the subject of the formula $k(p - 2q) = 3p + 2$
4. Make r the subject of the formula $p = \pi r + 2r + 2a$
5. Make a the subject of the formula $2(3a - c) = 5c + 1$
6. Make m the subject of the formula $2(2p + m) = 3 - 5m$

7. Make x the subject of $5(x - 3) = y(4 - 3x)$

8. When you are h feet above sea level, you can see d miles to the horizon, where $d = \sqrt{\frac{3h}{2}}$. Make h the subject of the formula.

9. Rearrange the formula $y = \frac{2pt}{p-t}$, to make t the subject.

10. Make b the subject of the formula $a = \frac{2-7b}{b-5}$

11. Rearrange the formula to make a the subject $P = \frac{n^2+a}{n+a}$

12. Make x the subject of the formula $\frac{x}{x+c} = \frac{p}{q}$

13. Rearrange to make u the subject of the formula, $\frac{1}{u} + \frac{1}{v} = \frac{1}{f}$, simplify your answer