

Year 12 / AS

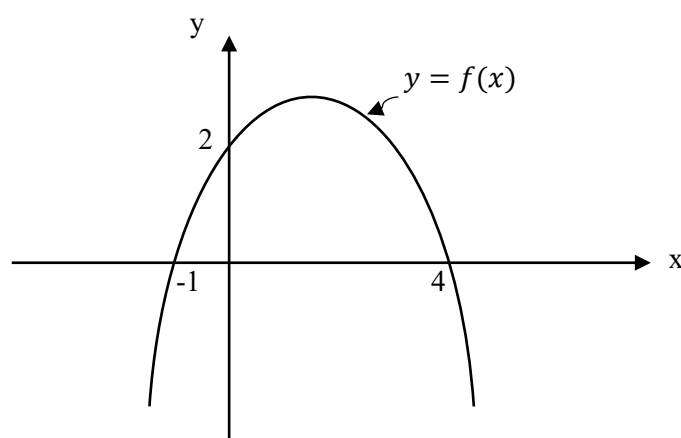
Weekly Tutorial 03

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1. Simplify. $\frac{(a-b)^2}{(\sqrt{a}-\sqrt{b})^2}$

2. The equation $x^2 - (k + 3)x + k^2 = 0$, has no real roots. Where k is a real constant. Find the range of possible values of k .

3.



Find $f(x)$ in the form $ax^2 + bx + c$. Where a , b and c real constants.

4. Solve, $y = 2x^2 + 3x - 5$
 $y = 7 - 2x$

5. Prove that the graph of $f(x) = 3x^2 - 5x + 4$ and the graph of $y = 12 - 9x$ never meet.

6. $y = ax^2 + bx + c$
 $y = mx + c$

Given that $a > 0$, find the condition that the constant c and c should satisfy for the curve and the line to intersect at two distinct points.