

Common Errors

Mathematics 12/Advanced Mathematics 12 June 2004 Examination

Some students:

- when solving equations such as $x^2 = 9$, write $\sqrt{x^2 = 9}$.
- when solving equations such as $2x^2 - 6x = 10$, write $\frac{2x^2 - 6x = 10}{2}$.
- express the quadratic formula as $x = -b \pm \frac{\sqrt{b^2 - 4ac}}{2a}$.
- do not express the y–intercept as a coordinate point.
- do not express the equation of the axis of symmetry as an equation.
- do not distinguish between an equation and an expression.
- misuse mathematical vocabulary such as:
 - the vertex of a circle
 - the end of a circle
 - bisect vs intersect
- do not know what is meant by an exact value.
- cannot demonstrate an understanding of the concept of converse.
- have enormous difficulty with geometric proofs.
- do not understand the significance of $-\frac{b}{2a}$.
- are unfamiliar with imaginary numbers.
- have a lack of understanding of the correlation coefficient.
- have difficulty solving exponential and logarithmic equations.
- have great difficulty with “explain questions”.
- do not have a solid understanding of domain and range although there was an improvement on the June examination.