# General mathematical vocabulary

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| **Phrase** | **Definition** |
| ﻿a priori | A fact is known 'a priori' if it is evident from logic alone, without need of evidence. |
| ﻿ad hoc | For this purpose |
| ﻿ad infinitum | To infinity, usually referring to a never ending process. |
| ﻿Ansatz | An educated guess that is not rigourously backed up. |
| ﻿cf. confer | Compare |
| ﻿Conjecture | A result that is thought to be true but no proof exists. |
| ﻿Corollary | A smaller result that is a consequence from a larger theorem. |
| ﻿e.g. exempli gratia | For example |
| ﻿ergo | Therefore |
| ﻿errata | Errors, usually referring to a list of corrections made since the last edition. |
| ﻿et al. et alia | And others |
| ﻿etc. et cetera | And so on |
| ﻿Hypothesis | A proposal consistent with known data and not shown to be true or false. |
| ﻿i.e. id est | That is |
| ﻿ibid. ibidem | The same place. Usually means the reference being used is the same as the previous one. |
| ﻿iff if and only if | The preceding and subsequent statements are equivalent. |
| ﻿L.H.S. Left Hand Side | Refers to the left side of the equality in an equation and similar for inequalities etc. |
| ﻿Lemma | A statement and proof, relatively unimportant in their own right usually given in work towards a more substantial result such as a theorem. |
| ﻿modus ponendo tollens | If both statements A and B can't be true, and we know that A is true, we know that B is false. |
| ﻿modus ponens | If statement A implies B, and we know that A is true, then B is also true. |
| ﻿modus tollens | If statement A implies statement B and we know that statement B is false, then A is false. |
| ﻿n.b. nota bene | Note well |
| ﻿Q.E.D. quod erat demonstrandum | That which was to be proved. Given at the end of a proof. |
| ﻿Q.E.F. quod erat faciendum | That which was to be shown. Given at the end of a calculation. |
| ﻿R.H.S. Right Hand Side | Refers to the right side of the equality in an equation and similar for inequalities etc. |
| ﻿reductio ad absurdum | Reduction to absurdity. "This implies an absurtity and so is false." Proof by contradiction. |
| ﻿s.t. such that | such that |
| ﻿Theorem | A statement that has been proven from already established facts. |
| ﻿w.l.o.g. without loss of generality | An argument is to be used for a specific case, which is easily applied to the others. |
| ﻿w.r.t. with respect to | Referring to |