



Math for the people, by the people.

## TFAE

Canonical name	TFAE
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Entry type	Definition
Classification	msc 00A99
Synonym	the following are equivalent

The abbreviation “TFAE” is shorthand for “**t**he **f**ollowing **a**re **e**quivalent”. It is used before a set of equivalent conditions (each implies all the others).

In a definition, when one of the conditions is somehow “better” (simpler, shorter, ...), it makes sense to phrase the definition with that condition, and mention that the others are equivalent. “TFAE” is typically used when none of the conditions can take priority over the others. Actually proving the claimed equivalence must, of course, be done separately.