

**Proposal for C2Y
WG14 N3303**

Title: missing **HUGE_VAL** suffixes
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Proposal category: Editorial
Reference: N3220

7.12.1p5 says

If a floating result overflows and default rounding is in effect, then the function returns the value of the macro **HUGE_VAL**, **HUGE_VALF**, or **HUGE_VALL** according to the return type, with the same sign as the correct value of the function;

However, this is intended to apply to all real floating types. The suggested change below generalizes the statement to do that.

This isn't actually a technical change. The other types (decimal, interchange, and extended floating types) must conform to ISO/IEC 60559 which requires returning a properly signed infinity on overflows with default rounding, and C specifies **HUGE_VAL** macros for those types to be positive infinity (7.12p6, H.11.1p2).

Suggested changes:

In 7.12.1p5:

If a floating result overflows and default rounding is in effect, then the function returns the value of the macro **HUGE_VAL**, ~~**HUGE_VALF**, or **HUGE_VALL**~~ **suffixed** according to the return type, with the same sign as the correct value of the function;