Quiz 7 Floating Point Classification

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1. Which one of the following issues does the IEEE 754 standard not address?
   a) Binary and decimal floating-point data.
   b) Rounding rules.
   c) Rules for arithmetic and string-based operations.
   d) Exceptional handling.

2. Which one of the following features is not supported in IEEE 754?
   a) Integer interchange format.
   b) Quiet and signalling NaN (not a number).
   c) Extended and extendable precision formats.
   d) Total ordering for all floating-point numbers.

3. Which one of the following features is true concerning quiet NaN?
   a) 0.0/0.0 is a NaN.
   b) The occurrence of a qNaN can result in an exception.
   c) Division by zero always results in a NaN.
   d) Checking for the presence of NaNs in code does not affect performance.

4. Which three of the following two statements are true?
   a) `std::isinf` determines if a number is positive or negative infinity.
   b) `std::fpclassify` categories floating-point numbers.
   c) `std::fpclassify` has functionality to process floating-point status flags.
   d) `std::isfinite` is true for NaN numbers.

5. Which one of the following is not a NaN?
   a) std::exp(800).
   b) INFINITY – INFINITY.
   c) 0/0.
   d) std::log(0.0/1.0);

6. Which of the following statements are true?
   a) DBL_MIN/2 is subnormal.
   b) – 0.0 is zero.
   c) 1.0/0.0 is Inf.
   d) 1.0 is normal.