

# NAG Library Routine Document

## X07BBF

**Note:** before using this routine, please read the Users' Note for your implementation to check the interpretation of *bold italicised* terms and other implementation-dependent details.

### 1 Purpose

X07BBF creates a NaN (Not A Number).

### 2 Specification

```
SUBROUTINE X07BBF (QUIET, X)
INTEGER          QUIET
REAL (KIND=nag_wp) X
```

### 3 Description

X07BBF sets X to be a quiet or a signalling NaN (Not A Number).

### 4 References

IEEE (2008) *Standard for Floating-Point Arithmetic IEEE Standard 754-2008* IEEE, New York.

### 5 Arguments

- 1: QUIET – INTEGER *Input*  
*On entry:* determines whether a quiet or a signalling NaN is to be created. If QUIET = 1, the returned NaN is quiet, otherwise it is signalling. See reference IEEE (2008) for the distinction between the two kinds.
- 2: X – REAL (KIND=nag\_wp) *Output*  
*On exit:* the required NaN value.

### 6 Error Indicators and Warnings

None.

### 7 Accuracy

Not applicable.

### 8 Parallelism and Performance

X07BBF is not threaded in any implementation.

### 9 Further Comments

None.

## **10 Example**

See Section 10 in X07AAF.

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