

Subject: RRSPACING (UTI 092)
 From: Van Snyder

1 Introduction

2 UTI 092 argues that RRSPACING(X) should be an IEEE NaN if X is IEEE Inf. On the other hand, how-
 3 ever, RRSPACING(X) can be written as ABS(FRACTION(X)) * RADIX(X) / EPSILON(X). RADIX
 4 and EPSILON are inquiry functions, so their result values don't depend upon their argument values,
 5 while the result value of FRACTION(X) is defined to be "the same value as X" if X is an IEEE infinity.
 6 I would be really surprised if ABS(Inf) or ABS(-Inf) were not Inf, so RRSPACING(\pm Inf) ought to be
 7 +Inf.

8 2 Edits

9 Edits refer to 07-007. Page and line numbers are displayed in the margin. Absent other instructions, a
 10 page and line number or line number range implies all of the indicated text is to be replaced by associated
 11 text, while a page and line number followed by + (-) indicates that associated text is to be inserted after
 12 (before) the indicated line. Remarks are noted in the margin, or appear between [and] in the text.

13 [Editor: "zero" \Rightarrow "an IEEE NaN".] 420:9

14 [Editor: Delete UTI 092.] 420:10+

15 3 On the other hand

16 [Editor: insert "= ABS(FRACTION(X)) * RADIX(X) / EPSILON(X)" after "*b^p*".] 420:7

17 [Editor: "zero" \Rightarrow "IEEE_VALUE(X,IEEE_POSITIVE_INF) (14.1, 14.10.36)" or "zero" \Rightarrow "positive 420:9
 18 IEEE infinity".]

19 [Editor: Delete UTI 092.] 420:10+