1.Lang7

Analysis:The developer patch uses the trim() method, however the comment “This method does not trim the input string, i.e., strings with leading

or trailing spaces will generate NumberFormatExceptions.” shows that the leading and trailing spaces have been checked, and there is no need to use the trim() method. So the ACS generated patch is identical to the developer patch.

2.Math3

Analysis:The ACS generated patch is identical to the developer patch.

3.Math25

Analysis:The ACS generated patch is identical to the developer patch.

4.Math35

Analysis:The ACS generated patch is identical to the developer patch.

5.Math61

Analysis:The ACS generated patch is identical to the developer patch.

6.Math82

Analysis:The ACS generated patch is identical to the developer patch.

7.Math85

Analysis:The ACS generated patch is identical to the developer patch.

8.Math89

Analysis:The ACS generated patch is identical to the developer patch.

9.Math90

Analysis:The ACS generated patch is identical to the developer patch.

10.Time15

Analysis:The ACS generated patch is identical to the developer patch.

11.Lang24

Analysis:The ACS generated patch is identical to the developer patch.

1. Chart14

Analysis:The ACS generated patch is identical to the developer patch.

13.Chart19

Analysis:The ACS generated patch is identical to the developer patch.

1. Lang35

Analysis:The ACS generated patch is identical to the developer patch.

15.Math4

Analysis:The ACS generated patch is identical to the developer patch.

16.Math5

Analysis:The ACS generated patch is identical to the developer patch.

17.Math93

Analysis:There are three developer patches, but the third patch has nothing to do with the bug, and the other two developer patches are identical to ACS's patches. Note that, the predicate in ACS patch is < 20, which in developer patch is <= 20, , so we need not to consider the factorial of 20.

18.Math99

Analysis:The ACS generated patch is identical to the developer patch.