```
/*
===========================================================
* JFreeChart : a free chart library for the Java(tm)
platform
*
===========================================================
*
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Contributors.
*
* Project Info:
http://www.jfree.org/jfreechart/index.html
*
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License as published by
* the Free Software Foundation; either version 2.1 of the
License, or
* (at your option) any later version.

*

* This library is distributed in the hope that it will be
useful, but
```

```
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   contributors.
 *

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   Limited);
 * Contributor(s):   Peter Kolb (patch 2511330);

 *

 * Changes

 * -------

 * 05-Mar-2003 : Version 1 (DG);

 * 03-Mar-2005 : Moved createNumberArray() and
   createNumberArray2D() methods
 *               from the DatasetUtilities class (DG);

 * 17-May-2005 : Added calculateColumnTotal() and
   calculateRowTotal()
 *               methods (DG);

 * 28-Jan-2009 : Added equal(double[][], double[][])
   method (DG);
 * 28-Jan-2009 : Added clone(double[][]) method (DG);

 * 04-Feb-2009 : Added calculateColumnTotal/RowTotal
   variants (PK);
```

```
 *  03-Jul-2013 : Use ParamChecks (DG);

 *

 */



package org.jfree.data;



import java.util.Arrays;

import org.jfree.chart.util.ParamChecks;

import org.jfree.data.general.DatasetUtilities;



/**

 * Utility methods for use with some of the data classes (but not the datasets,

 * see {@link DatasetUtilities}).

 */
public abstract class DataUtilities {
```

```java
60
61      /**
62       * Tests two arrays for equality.  To be considered
        equal, the arrays must
63       * have exactly the same dimensions, and the values in
        each array must also
64       * match (two values that qre both NaN or both INF are
        considered equal
65       * in this test).
66       *
67       * @param a  the first array (<code>null</code>
        permitted).
68       * @param b  the second array (<code>null</code>
        permitted).
69       *
70       * @return A boolean.
71       *
72       * @since 1.0.13
73       */
74      public static boolean equal(double[][] a, double[][]
        b) {
```

```java
75      4           if (a == null) {
76      19              return (b == null);
77                  }

78      4           if (b == null) {
79      7              return false;   // already know 'a' isn't null
80                  }

81      8           if (a.length != b.length) {
82      7              return false;
83                  }

84      19          for (int i = 0; i < a.length; i++) {
85      19              if (!Arrays.equals(a[i], b[i])) {
86      7                  return false;
87                  }
88              }

89      8           return true;
```

```
90          }

91

92          /**

93           * Returns a clone of the specified array.

94           *

95           * @param source  the source array (<code>null</code>
            not permitted).

96           *

97           * @return A clone of the array.

98           *

99           * @since 1.0.13

100          */

101      public static double[][] clone(double[][] source) {

102 1         ParamChecks.nullNotPermitted(source, "source");

103          double[][] clone = new double[source.length][];
```

```java
        for (int i = 0; i < source.length; i++) {

            if (source[i] != null) {

                double[] row = new
double[source[i].length];

                System.arraycopy(source[i], 0, row, 0,
source[i].length);

                clone[i] = row;
            }

        }

        return clone;

    }

    /**
```

```
    * Returns the total of the values in one column of
the supplied data

    * table.

    *

    * @param data  the table of values (<code>null</code>
not permitted).

    * @param column  the column index (zero-based).

    *

    * @return The total of the values in the specified
column.

    */

    public static double calculateColumnTotal(Values2D
data, int column) {
        ParamChecks.nullNotPermitted(data, "data");

        double total = 0.0;
```

```
126    1    1          int rowCount = data.getRowCount();

125    2    5          for (int r = 0; r < rowCount; r++) {

128    1    1              Number n = data.getValue(r, column);

129    1    4              if (n != null) {

130    1    1                  total += n.doubleValue();

131                      }

132                  }

133    1    7          return total;

134              }

135

136          /**
```

```
137     * Returns the total of the values in one column of
        the supplied data

138     * table by taking only the row numbers in the array
        into account.

139     *

140     * @param data  the table of values (<code>null</code>
        not permitted).

141     * @param column  the column index (zero-based).

142     * @param validRows the array with valid rows
        (zero-based).

143     *

144     * @return The total of the valid values in the
        specified column.

145     *

146     * @since 1.0.13

147     */
```

```java
    public static double calculateColumnTotal(Values2D data, int column,

                  int[] validRows) {
        ParamChecks.nullNotPermitted(data, "data");

        double total = 0.0;

        int rowCount = data.getRowCount();

        for (int v = 0; v < validRows.length; v++) {

            int row = validRows[v];

            if (row < rowCount) {

                Number n = data.getValue(row, column);

                if (n != null) {

                    total += n.doubleValue();
```

```
159                    }

160                }

161            }

162    7        return total;

163        }

164

165        /**

166         * Returns the total of the values in one row of the
         supplied data

167         * table.

168         *

169         * @param data   the table of values (<code>null</code>
         not permitted).
```

```
        * @param row   the row index (zero-based).
        *
        * @return The total of the values in the specified
row.
        */
    public static double calculateRowTotal(Values2D data,
int row) {
        ParamChecks.nullNotPermitted(data, "data");
        double total = 0.0;
        int columnCount = data.getColumnCount();
        for (int c = 0; c < columnCount; c++) {
            Number n = data.getValue(row, c);
            if (n != null) {
```

```java
                    total += n.doubleValue();

                }

            }

        return total;

    }



    /**

     * Returns the total of the values in one row of the supplied data

     * table by taking only the column numbers in the array into account.

     *

     * @param data  the table of values (<code>null</code> not permitted).
```

```
 * @param row  the row index (zero-based).

 * @param validCols the array with valid cols
(zero-based).

 *

 * @return The total of the valid values in the
specified row.

 *

 * @since 1.0.13

 */

    public static double calculateRowTotal(Values2D data,
int row,

              int[] validCols) {

        ParamChecks.nullNotPermitted(data, "data");

        double total = 0.0;
```

```
203    1          int colCount = data.getColumnCount();

204    20         for (int v = 0; v < validCols.length; v++) {

205    10             int col = validCols[v];

206    19             if (col < colCount) {

207    11                 Number n = data.getValue(row, col);

208    4                 if (n != null) {

209    13                     total += n.doubleValue();

210                        }

211                    }

212                }

213    7          return total;
```

```
    }


    /**
     * Constructs an array of <code>Number</code> objects from an array of

     * <code>double</code> primitives.

     *

     * @param data  the data (<code>null</code> not permitted).

     *

     * @return An array of <code>Double</code>.

     */

    public static Number[] createNumberArray(double[] data) {
```

```
        ParamChecks.nullNotPermitted(data, "data");

        Number[] result = new Number[data.length];

        for (int i = 0; i < data.length; i++) {

            result[i] = new Double(data[i]);

        }

        return result;

    }

    /**

     * Constructs an array of arrays of <code>Number</code> objects from a

     * corresponding structure containing <code>double</code> primitives.
```

```
236          *

237          * @param data  the data (<code>null</code> not
       permitted).

238          *

239          * @return An array of <code>Double</code>.

240          */

241     public static Number[][]
       createNumberArray2D(double[][] data) {

242  1       ParamChecks.nullNotPermitted(data, "data");

243          int l1 = data.length;

244  5       Number[][] result = new Number[l1][];

245  2       for (int i = 0; i < l1; i++) {
     5

246  1           result[i] = createNumberArray(data[i]);
     1
```

```
247              }

248  2          return result;

249          }

250


251          /**

252              * Returns a {@link KeyedValues} instance that
     contains the cumulative

253              * percentage values for the data in another {@link
     KeyedValues} instance.

254              * <p>

255              * The percentages are values between 0.0 and 1.0
     (where 1.0 = 100%).

256              *

257              * @param data  the data (<code>null</code> not
     permitted).
```

```
258          *

259          * @return The cumulative percentages.

260          */

261     public static KeyedValues
        getCumulativePercentages(KeyedValues data) {

262  1          ParamChecks.nullNotPermitted(data, "data");

263  1          DefaultKeyedValues result = new
        DefaultKeyedValues();

264  5          double total = 0.0;

265  20          for (int i = 0; i < data.getItemCount(); i++) {

266  6              Number v = data.getValue(i);

267  4              if (v != null) {

268  13                  total = total + v.doubleValue();
```

```
269                    }

270                }

271    5          double runningTotal = 0.0;

272    2          for (int i = 0; i < data.getItemCount(); i++) {
       0

273    6              Number v = data.getValue(i);

274    4              if (v != null) {

275    1                  runningTotal = runningTotal +
       3  v.doubleValue();

276                }

277    2              result.addValue(data.getKey(i), new
       5  Double(runningTotal / total));

278            }

279    2          return result;
```

```
280        }


281


282    }
```

Mutations

<table>
<tr><td>75</td><td>1. negated conditional → KILLED
2. removed conditional - replaced equality check with false → KILLED
3. removed conditional - replaced equality check with true → KILLED
4. not equal to equal → KILLED</td></tr>
<tr><td>76</td><td>1. replaced boolean return with false for org/jfree/data/DataUtilities::equal → KILLED
2. replaced boolean return with true for org/jfree/data/DataUtilities::equal → KILLED
3. Substituted 1 with 0 → KILLED
4. Substituted 0 with 1 → KILLED
5. negated conditional → KILLED
6. removed conditional - replaced equality check with false → KILLED
7. removed conditional - replaced equality check with true → KILLED
8. replaced return of integer sized value with (x == 0 ? 1 : 0) → KILLED
9. replaced return of integer sized value with (x == 0 ? 1 : 0) → KILLED
10. Substituted 0 with 1 → KILLED
11. Substituted 1 with 0 → KILLED
12. Substituted 1 with -1 → SURVIVED
13. Substituted 0 with -1 → KILLED</td></tr>
</table>

	14. Substituted 1 with -1 → SURVIVED
	15. Substituted 1 with 2 → KILLED
	16. Substituted 0 with 1 → KILLED
	17. Substituted 1 with 0 → KILLED
	18. Substituted 0 with -1 → KILLED
	19. not equal to equal → KILLED
7	1. negated conditional → KILLED
8	2. removed conditional - replaced equality check with false → KILLED
	3. removed conditional - replaced equality check with true → KILLED
	4. not equal to equal → KILLED
7	1. replaced boolean return with true for org/jfree/data/DataUtilities::equal → KILLED
9	2. Substituted 0 with 1 → KILLED
	3. replaced return of integer sized value with (x == 0 ? 1 : 0) → KILLED
	4. Substituted 0 with 1 → KILLED
	5. Substituted 0 with -1 → KILLED
	6. Substituted 0 with 1 → KILLED
	7. Substituted 0 with -1 → KILLED
8	1. negated conditional → KILLED
1	2. removed conditional - replaced equality check with false → KILLED
	3. removed conditional - replaced equality check with true → KILLED
	4. equal to less than → KILLED
	5. equal to less or equal → KILLED
	6. equal to greater than → KILLED
	7. equal to greater or equal → SURVIVED
	8. equal to not equal → KILLED

8 2	1. replaced boolean return with true for org/jfree/data/DataUtilities::equal → KILLED 2. Substituted 0 with 1 → KILLED 3. replaced return of integer sized value with (x == 0 ? 1 : 0) → KILLED 4. Substituted 0 with 1 → KILLED 5. Substituted 0 with -1 → KILLED 6. Substituted 0 with 1 → KILLED 7. Substituted 0 with -1 → KILLED
8 4	1. changed conditional boundary → KILLED 2. Substituted 0 with 1 → SURVIVED 3. negated conditional → KILLED 4. removed conditional - replaced comparison check with false → KILLED 5. removed conditional - replaced comparison check with true → KILLED 6. Negated integer local variable number 2 → KILLED 7. Substituted 0 with 1 → SURVIVED 8. Substituted 0 with -1 → KILLED 9. Substituted 0 with 1 → SURVIVED 10. Substituted 0 with -1 → KILLED 11. Less than to less or equal → KILLED 12. Less than to greater than → KILLED 13. Less than to greater or equal → KILLED 14. Less than to equal → KILLED 15. Less than to not equal → SURVIVED 16. Incremented (a++) integer local variable number 2 → SURVIVED 17. Decremented (a--) integer local variable number 2 → KILLED 18. Incremented (++a) integer local variable number 2 → SURVIVED 19. Decremented (--a) integer local variable number 2 → KILLED

8 5	1. negated conditional → KILLED 2. removed call to java/util/Arrays::equals → KILLED 3. removed conditional - replaced equality check with false → KILLED 4. removed conditional - replaced equality check with true → KILLED 5. Negated integer local variable number 2 → KILLED 6. Negated integer local variable number 2 → KILLED 7. not equal to less than → KILLED 8. not equal to less or equal → KILLED 9. not equal to greater than → SURVIVED 10. not equal to greater or equal → KILLED 11. not equal to equal → KILLED 12. Incremented (a++) integer local variable number 2 → KILLED 13. Incremented (a++) integer local variable number 2 → KILLED 14. Decremented (a--) integer local variable number 2 → KILLED 15. Decremented (a--) integer local variable number 2 → TIMED_OUT 16. Incremented (++a) integer local variable number 2 → SURVIVED 17. Incremented (++a) integer local variable number 2 → KILLED 18. Decremented (--a) integer local variable number 2 → KILLED 19. Decremented (--a) integer local variable number 2 → KILLED
8 6	1. replaced boolean return with true for org/jfree/data/DataUtilities::equal → KILLED 2. Substituted 0 with 1 → KILLED 3. replaced return of integer sized value with (x == 0 ? 1 : 0) → KILLED 4. Substituted 0 with 1 → KILLED 5. Substituted 0 with -1 → KILLED 6. Substituted 0 with 1 → KILLED 7. Substituted 0 with -1 → KILLED

8 9	1. replaced boolean return with false for org/jfree/data/DataUtilities::equal → KILLED 2. Substituted 1 with 0 → KILLED 3. replaced return of integer sized value with (x == 0 ? 1 : 0) → KILLED 4. Substituted 1 with 0 → KILLED 5. Substituted 1 with -1 → SURVIVED 6. Substituted 1 with -1 → SURVIVED 7. Substituted 1 with 2 → KILLED 8. Substituted 1 with 0 → KILLED
1 0 2	1.
1 0 4	1. changed conditional boundary → KILLED 2. Substituted 0 with 1 → KILLED 3. negated conditional → KILLED 4. removed conditional - replaced comparison check with false → KILLED 5. removed conditional - replaced comparison check with true → KILLED 6. Negated integer local variable number 2 → KILLED 7. Substituted 0 with 1 → KILLED 8. Substituted 0 with -1 → KILLED 9. Substituted 0 with 1 → KILLED 10. Substituted 0 with -1 → KILLED 11. Less than to less or equal → KILLED 12. Less than to greater than → KILLED 13. Less than to greater or equal → KILLED 14. Less than to equal → KILLED 15. Less than to not equal → SURVIVED 16. Incremented (a++) integer local variable number 2 → KILLED 17. Decremented (a--) integer local variable number 2 → KILLED 18. Incremented (++a) integer local variable number 2 → KILLED 19. Decremented (--a) integer local variable number 2 → KILLED

```
105    1. negated conditional → KILLED
       2. removed conditional - replaced equality check with
       false → KILLED
       3. removed conditional - replaced equality check with
       true → KILLED
       4. Negated integer local variable number 2 → KILLED
       5. equal to not equal → KILLED
       6. Incremented (a++) integer local variable number 2 →
       KILLED
       7. Decremented (a--) integer local variable number 2 →
       KILLED
       8. Incremented (++a) integer local variable number 2 →
       KILLED
       9. Decremented (--a) integer local variable number 2 →
       KILLED

106    1. Negated integer local variable number 2 → KILLED
       2. Incremented (a++) integer local variable number 2 →
       KILLED
       3. Decremented (a--) integer local variable number 2 →
       KILLED
       4. Incremented (++a) integer local variable number 2 →
       KILLED
       5. Decremented (--a) integer local variable number 2 →
       KILLED
```

1 0 7	1. Substituted 0 with 1 → KILLED 2. Substituted 0 with 1 → KILLED 3. removed call to java/lang/System::arraycopy → KILLED 4. Negated integer local variable number 2 → KILLED 5. Negated integer local variable number 2 → KILLED 6. Substituted 0 with 1 → KILLED 7. Substituted 0 with 1 → KILLED 8. Substituted 0 with -1 → KILLED 9. Substituted 0 with -1 → KILLED 10. Substituted 0 with 1 → KILLED 11. Substituted 0 with 1 → KILLED 12. Substituted 0 with -1 → KILLED 13. Substituted 0 with -1 → KILLED 14. Incremented (a++) integer local variable number 2 → KILLED 15. Incremented (a++) integer local variable number 2 → KILLED 16. Decremented (a--) integer local variable number 2 → KILLED 17. Decremented (a--) integer local variable number 2 → KILLED 18. Incremented (++a) integer local variable number 2 → KILLED 19. Incremented (++a) integer local variable number 2 → KILLED 20. Decremented (--a) integer local variable number 2 → KILLED 21. Decremented (--a) integer local variable number 2 → KILLED
1 0 8	1. Negated integer local variable number 2 → KILLED 2. Incremented (a++) integer local variable number 2 → KILLED 3. Decremented (a--) integer local variable number 2 → TIMED_OUT 4. Incremented (++a) integer local variable number 2 → KILLED 5. Decremented (--a) integer local variable number 2 → KILLED

1 1 1	1. replaced return value with null for org/jfree/data/DataUtilities::clone → KILLED 2. mutated return of Object value for org/jfree/data/DataUtilities::clone to (if (x != null) null else throw new RuntimeException) → KILLED
1 2 4	1.
1 2 5	1. Substituted 0.0 with 1.0 → KILLED 2. Substituted 0.0 with 1.0 → KILLED 3. Substituted 0.0 with -1.0 → KILLED 4. Substituted 0.0 with 1.0 → KILLED 5. Substituted 0.0 with -1.0 → KILLED
1 2 6	1.

```
1       1. changed conditional boundary → KILLED
2       2. Changed increment from 1 to -1 → KILLED
7       3. Substituted 0 with 1 → KILLED
        4. negated conditional → KILLED
        5. removed conditional - replaced comparison check with
        false → KILLED
        6. removed conditional - replaced comparison check with
        true → KILLED
        7. Negated integer local variable number 5 → KILLED
        8. Negated integer local variable number 4 → KILLED
        9. Substituted 0 with 1 → KILLED
        10. Substituted 0 with -1 → KILLED
        11. Substituted 0 with 1 → KILLED
        12. Substituted 0 with -1 → KILLED
        13. Less than to less or equal → KILLED
        14. Less than to greater than → KILLED
        15. Less than to greater or equal → KILLED
        16. Less than to equal → KILLED
        17. Less than to not equal → KILLED
        18. Incremented (a++) integer local variable number 5 →
        KILLED
        19. Incremented (a++) integer local variable number 4 →
        KILLED
        20. Decremented (a--) integer local variable number 5 →
        KILLED
        21. Decremented (a--) integer local variable number 4 →
        KILLED
        22. Incremented (++a) integer local variable number 5 →
        KILLED
        23. Incremented (++a) integer local variable number 4 →
        KILLED
        24. Decremented (--a) integer local variable number 5 →
        KILLED
        25. Decremented (--a) integer local variable number 4 →
        KILLED
```

1 2 8	1. removed call to org/jfree/data/Values2D::getValue → KILLED 2. Negated integer local variable number 5 → KILLED 3. Negated integer local variable number 1 → SURVIVED 4. Incremented (a++) integer local variable number 5 → KILLED 5. Incremented (a++) integer local variable number 1 → KILLED 6. Decremented (a--) integer local variable number 5 → KILLED 7. Decremented (a--) integer local variable number 1 → KILLED 8. Incremented (++a) integer local variable number 5 → KILLED 9. Incremented (++a) integer local variable number 1 → KILLED 10. Decremented (--a) integer local variable number 5 → KILLED 11. Decremented (--a) integer local variable number 1 → KILLED
1 2 9	1. negated conditional → KILLED 2. removed conditional - replaced equality check with false → KILLED 3. removed conditional - replaced equality check with true → SURVIVED 4. equal to not equal → KILLED
1 3 0	1. Replaced double addition with subtraction → KILLED 2. removed call to java/lang/Number::doubleValue → KILLED 3. Negated double local variable number 2 → KILLED 4. Replaced double operation with first member → KILLED 5. Replaced double operation by second member → KILLED 6. Replaced double addition with subtraction → KILLED 7. Replaced double addition with multiplication → KILLED 8. Replaced double addition with division → KILLED 9. Replaced double addition with modulus → KILLED 10. Incremented (a++) double local variable number 2 → SURVIVED 11. Decremented (a--) double local variable number 2 → SURVIVED

	12. Incremented (++a) double local variable number 2 → KILLED 13. Decremented (--a) double local variable number 2 → KILLED
1 3 3	1. replaced double return with 0.0d for org/jfree/data/DataUtilities::calculateColumnTotal → KILLED 2. replaced return of double value with -(x + 1) for org/jfree/data/DataUtilities::calculateColumnTotal → KILLED 3. Negated double local variable number 2 → KILLED 4. Incremented (a++) double local variable number 2 → SURVIVED 5. Decremented (a--) double local variable number 2 → SURVIVED 6. Incremented (++a) double local variable number 2 → KILLED 7. Decremented (--a) double local variable number 2 → KILLED
1 5 0	1.
1 5 1	1. Substituted 0.0 with 1.0 → NO_COVERAGE 2. Substituted 0.0 with 1.0 → NO_COVERAGE 3. Substituted 0.0 with -1.0 → NO_COVERAGE 4. Substituted 0.0 with 1.0 → NO_COVERAGE 5. Substituted 0.0 with -1.0 → NO_COVERAGE
1 5 2	1.

```
1    1. changed conditional boundary → NO_COVERAGE
5    2. Changed increment from 1 to -1 → NO_COVERAGE
3    3. Substituted 0 with 1 → NO_COVERAGE
     4. negated conditional → NO_COVERAGE
     5. removed conditional - replaced comparison check with
     false → NO_COVERAGE
     6. removed conditional - replaced comparison check with
     true → NO_COVERAGE
     7. Negated integer local variable number 6 → NO_COVERAGE
     8. Substituted 0 with 1 → NO_COVERAGE
     9. Substituted 0 with -1 → NO_COVERAGE
     10. Substituted 0 with 1 → NO_COVERAGE
     11. Substituted 0 with -1 → NO_COVERAGE
     12. Less than to less or equal → NO_COVERAGE
     13. Less than to greater than → NO_COVERAGE
     14. Less than to greater or equal → NO_COVERAGE
     15. Less than to equal → NO_COVERAGE
     16. Less than to not equal → NO_COVERAGE
     17. Incremented (a++) integer local variable number 6 →
     NO_COVERAGE
     18. Decremented (a--) integer local variable number 6 →
     NO_COVERAGE
     19. Incremented (++a) integer local variable number 6 →
     NO_COVERAGE
     20. Decremented (--a) integer local variable number 6 →
     NO_COVERAGE

1    1. Negated integer local variable number 6 → NO_COVERAGE
5    2. Negated integer array field → NO_COVERAGE
4    3. Incremented (a++) integer local variable number 6 →
     NO_COVERAGE
     4. Incremented (a++) integer array field → NO_COVERAGE
     5. Decremented (a--) integer local variable number 6 →
     NO_COVERAGE
     6. Decremented (a--) integer array field → NO_COVERAGE
     7. Incremented (++a) integer local variable number 6 →
     NO_COVERAGE
     8. Incremented (++a) integer array field → NO_COVERAGE
     9. Decremented (--a) integer local variable number 6 →
     NO_COVERAGE
     10. Decremented (--a) integer array field → NO_COVERAGE
```

1 5 5	1. changed conditional boundary → NO_COVERAGE 2. negated conditional → NO_COVERAGE 3. removed conditional - replaced comparison check with false → NO_COVERAGE 4. removed conditional - replaced comparison check with true → NO_COVERAGE 5. Negated integer local variable number 7 → NO_COVERAGE 6. Negated integer local variable number 5 → NO_COVERAGE 7. greater or equal to less than → NO_COVERAGE 8. greater or equal to less or equal → NO_COVERAGE 9. greater or equal to greater than → NO_COVERAGE 10. greater or equal to equal → NO_COVERAGE 11. greater or equal to not equal → NO_COVERAGE 12. Incremented (a++) integer local variable number 7 → NO_COVERAGE 13. Incremented (a++) integer local variable number 5 → NO_COVERAGE 14. Decremented (a--) integer local variable number 7 → NO_COVERAGE 15. Decremented (a--) integer local variable number 5 → NO_COVERAGE 16. Incremented (++a) integer local variable number 7 → NO_COVERAGE 17. Incremented (++a) integer local variable number 5 → NO_COVERAGE 18. Decremented (--a) integer local variable number 7 → NO_COVERAGE 19. Decremented (--a) integer local variable number 5 → NO_COVERAGE
1 5 6	1. removed call to org/jfree/data/Values2D::getValue → NO_COVERAGE 2. Negated integer local variable number 7 → NO_COVERAGE 3. Negated integer local variable number 1 → NO_COVERAGE 4. Incremented (a++) integer local variable number 7 → NO_COVERAGE 5. Incremented (a++) integer local variable number 1 → NO_COVERAGE 6. Decremented (a--) integer local variable number 7 → NO_COVERAGE

7. Decremented (a--) integer local variable number 1 →
NO_COVERAGE
8. Incremented (++a) integer local variable number 7 →
NO_COVERAGE
9. Incremented (++a) integer local variable number 1 →
NO_COVERAGE
10. Decremented (--a) integer local variable number 7 →
NO_COVERAGE
11. Decremented (--a) integer local variable number 1 →
NO_COVERAGE

1
5
7

1. negated conditional → NO_COVERAGE
2. removed conditional - replaced equality check with
false → NO_COVERAGE
3. removed conditional - replaced equality check with
true → NO_COVERAGE
4. equal to not equal → NO_COVERAGE

1
5
8

1. Replaced double addition with subtraction →
NO_COVERAGE
2. removed call to java/lang/Number::doubleValue →
NO_COVERAGE
3. Negated double local variable number 3 → NO_COVERAGE
4. Replaced double operation with first member →
NO_COVERAGE
5. Replaced double operation by second member →
NO_COVERAGE
6. Replaced double addition with subtraction →
NO_COVERAGE
7. Replaced double addition with multiplication →
NO_COVERAGE
8. Replaced double addition with division → NO_COVERAGE
9. Replaced double addition with modulus → NO_COVERAGE
10. Incremented (a++) double local variable number 3 →
NO_COVERAGE
11. Decremented (a--) double local variable number 3 →
NO_COVERAGE
12. Incremented (++a) double local variable number 3 →
NO_COVERAGE
13. Decremented (--a) double local variable number 3 →
NO_COVERAGE

162

1. replaced double return with 0.0d for org/jfree/data/DataUtilities::calculateColumnTotal → NO_COVERAGE
2. replaced return of double value with -(x + 1) for org/jfree/data/DataUtilities::calculateColumnTotal → NO_COVERAGE
3. Negated double local variable number 3 → NO_COVERAGE
4. Incremented (a++) double local variable number 3 → NO_COVERAGE
5. Decremented (a--) double local variable number 3 → NO_COVERAGE
6. Incremented (++a) double local variable number 3 → NO_COVERAGE
7. Decremented (--a) double local variable number 3 → NO_COVERAGE

175   1.

176

1. Substituted 0.0 with 1.0 → KILLED
2. Substituted 0.0 with 1.0 → KILLED
3. Substituted 0.0 with -1.0 → KILLED
4. Substituted 0.0 with 1.0 → KILLED
5. Substituted 0.0 with -1.0 → KILLED

177   1.

```
1      1. changed conditional boundary → KILLED
7      2. Changed increment from 1 to -1 → KILLED
8      3. Substituted 0 with 1 → KILLED
       4. negated conditional → KILLED
       5. removed conditional - replaced comparison check with
       false → KILLED
       6. removed conditional - replaced comparison check with
       true → KILLED
       7. Negated integer local variable number 5 → KILLED
       8. Negated integer local variable number 4 → KILLED
       9. Substituted 0 with 1 → KILLED
       10. Substituted 0 with -1 → KILLED
       11. Substituted 0 with 1 → KILLED
       12. Substituted 0 with -1 → KILLED
       13. Less than to less or equal → KILLED
       14. Less than to greater than → KILLED
       15. Less than to greater or equal → KILLED
       16. Less than to equal → KILLED
       17. Less than to not equal → SURVIVED
       18. Incremented (a++) integer local variable number 5 →
       KILLED
       19. Incremented (a++) integer local variable number 4 →
       KILLED
       20. Decremented (a--) integer local variable number 5 →
       KILLED
       21. Decremented (a--) integer local variable number 4 →
       KILLED
       22. Incremented (++a) integer local variable number 5 →
       KILLED
       23. Incremented (++a) integer local variable number 4 →
       KILLED
       24. Decremented (--a) integer local variable number 5 →
       KILLED
       25. Decremented (--a) integer local variable number 4 →
       KILLED
```

1 7	1. removed call to org/jfree/data/Values2D::getValue → KILLED
9	2. Negated integer local variable number 1 → SURVIVED
	3. Negated integer local variable number 5 → KILLED
	4. Incremented (a++) integer local variable number 1 → KILLED
	5. Incremented (a++) integer local variable number 5 → KILLED
	6. Decremented (a--) integer local variable number 1 → KILLED
	7. Decremented (a--) integer local variable number 5 → KILLED
	8. Incremented (++a) integer local variable number 1 → KILLED
	9. Incremented (++a) integer local variable number 5 → KILLED
	10. Decremented (--a) integer local variable number 1 → KILLED
	11. Decremented (--a) integer local variable number 5 → KILLED
1 8 0	1. negated conditional → KILLED
	2. removed conditional - replaced equality check with false → KILLED
	3. removed conditional - replaced equality check with true → SURVIVED
	4. equal to not equal → KILLED
1 8 1	1. Replaced double addition with subtraction → KILLED
	2. removed call to java/lang/Number::doubleValue → KILLED
	3. Negated double local variable number 2 → KILLED
	4. Replaced double operation with first member → KILLED
	5. Replaced double operation by second member → KILLED
	6. Replaced double addition with subtraction → KILLED
	7. Replaced double addition with multiplication → KILLED
	8. Replaced double addition with division → KILLED
	9. Replaced double addition with modulus → KILLED
	10. Incremented (a++) double local variable number 2 → SURVIVED
	11. Decremented (a--) double local variable number 2 → SURVIVED

	12. Incremented (++a) double local variable number 2 → KILLED
	13. Decremented (--a) double local variable number 2 → KILLED
1 8 4	1. replaced double return with 0.0d for org/jfree/data/DataUtilities::calculateRowTotal → KILLED
	2. replaced return of double value with -(x + 1) for org/jfree/data/DataUtilities::calculateRowTotal → KILLED
	3. Negated double local variable number 2 → KILLED
	4. Incremented (a++) double local variable number 2 → SURVIVED
	5. Decremented (a--) double local variable number 2 → SURVIVED
	6. Incremented (++a) double local variable number 2 → KILLED
	7. Decremented (--a) double local variable number 2 → KILLED
2 0 1	1.
2 0 2	1. Substituted 0.0 with 1.0 → KILLED
	2. Substituted 0.0 with 1.0 → KILLED
	3. Substituted 0.0 with -1.0 → KILLED
	4. Substituted 0.0 with 1.0 → KILLED
	5. Substituted 0.0 with -1.0 → KILLED
2 0 3	1.

```
2    1. changed conditional boundary → KILLED
0    2. Changed increment from 1 to -1 → KILLED
4    3. Substituted 0 with 1 → KILLED
     4. negated conditional → KILLED
     5. removed conditional - replaced comparison check with
     false → KILLED
     6. removed conditional - replaced comparison check with
     true → KILLED
     7. Negated integer local variable number 6 → KILLED
     8. Substituted 0 with 1 → KILLED
     9. Substituted 0 with -1 → KILLED
     10. Substituted 0 with 1 → KILLED
     11. Substituted 0 with -1 → KILLED
     12. Less than to less or equal → KILLED
     13. Less than to greater than → KILLED
     14. Less than to greater or equal → KILLED
     15. Less than to equal → KILLED
     16. Less than to not equal → SURVIVED
     17. Incremented (a++) integer local variable number 6 →
     KILLED
     18. Decremented (a--) integer local variable number 6 →
     KILLED
     19. Incremented (++a) integer local variable number 6 →
     KILLED
     20. Decremented (--a) integer local variable number 6 →
     KILLED

2    1. Negated integer local variable number 6 → KILLED
0    2. Negated integer array field → KILLED
5    3. Incremented (a++) integer local variable number 6 →
     KILLED
     4. Incremented (a++) integer array field → SURVIVED
     5. Decremented (a--) integer local variable number 6 →
     KILLED
     6. Decremented (a--) integer array field → SURVIVED
     7. Incremented (++a) integer local variable number 6 →
     KILLED
     8. Incremented (++a) integer array field → KILLED
     9. Decremented (--a) integer local variable number 6 →
     KILLED
     10. Decremented (--a) integer array field → KILLED
```

2	1. changed conditional boundary → SURVIVED
0	2. negated conditional → KILLED
6	3. removed conditional - replaced comparison check with false → KILLED
	4. removed conditional - replaced comparison check with true → SURVIVED
	5. Negated integer local variable number 7 → SURVIVED
	6. Negated integer local variable number 5 → KILLED
	7. greater or equal to less than → KILLED
	8. greater or equal to less or equal → KILLED
	9. greater or equal to greater than → SURVIVED
	10. greater or equal to equal → SURVIVED
	11. greater or equal to not equal → KILLED
	12. Incremented (a++) integer local variable number 7 → KILLED
	13. Incremented (a++) integer local variable number 5 → SURVIVED
	14. Decremented (a--) integer local variable number 7 → KILLED
	15. Decremented (a--) integer local variable number 5 → KILLED
	16. Incremented (++a) integer local variable number 7 → KILLED
	17. Incremented (++a) integer local variable number 5 → SURVIVED
	18. Decremented (--a) integer local variable number 7 → KILLED
	19. Decremented (--a) integer local variable number 5 → KILLED
2	1. removed call to org/jfree/data/Values2D::getValue → KILLED
0	2. Negated integer local variable number 1 → SURVIVED
7	3. Negated integer local variable number 7 → KILLED
	4. Incremented (a++) integer local variable number 1 → KILLED
	5. Incremented (a++) integer local variable number 7 → SURVIVED
	6. Decremented (a--) integer local variable number 1 → KILLED

	7. Decremented (a--) integer local variable number 7 → SURVIVED
	8. Incremented (++a) integer local variable number 1 → KILLED
	9. Incremented (++a) integer local variable number 7 → KILLED
	10. Decremented (--a) integer local variable number 1 → KILLED
	11. Decremented (--a) integer local variable number 7 → KILLED
208	1. negated conditional → KILLED
	2. removed conditional - replaced equality check with false → KILLED
	3. removed conditional - replaced equality check with true → SURVIVED
	4. equal to not equal → KILLED
209	1. Replaced double addition with subtraction → KILLED
	2. removed call to java/lang/Number::doubleValue → KILLED
	3. Negated double local variable number 3 → KILLED
	4. Replaced double operation with first member → KILLED
	5. Replaced double operation by second member → KILLED
	6. Replaced double addition with subtraction → KILLED
	7. Replaced double addition with multiplication → KILLED
	8. Replaced double addition with division → KILLED
	9. Replaced double addition with modulus → KILLED
	10. Incremented (a++) double local variable number 3 → SURVIVED
	11. Decremented (a--) double local variable number 3 → SURVIVED
	12. Incremented (++a) double local variable number 3 → KILLED
	13. Decremented (--a) double local variable number 3 → KILLED

2 1 3	1. replaced double return with 0.0d for org/jfree/data/DataUtilities::calculateRowTotal → KILLED 2. replaced return of double value with -(x + 1) for org/jfree/data/DataUtilities::calculateRowTotal → KILLED 3. Negated double local variable number 3 → KILLED 4. Incremented (a++) double local variable number 3 → SURVIVED 5. Decremented (a--) double local variable number 3 → SURVIVED 6. Incremented (++a) double local variable number 3 → KILLED 7. Decremented (--a) double local variable number 3 → KILLED
2 2 5	1.
2 2 7	1. changed conditional boundary → KILLED 2. Substituted 0 with 1 → KILLED 3. negated conditional → KILLED 4. removed conditional - replaced comparison check with false → KILLED 5. removed conditional - replaced comparison check with true → KILLED 6. Negated integer local variable number 2 → KILLED 7. Substituted 0 with 1 → KILLED 8. Substituted 0 with -1 → KILLED 9. Substituted 0 with 1 → KILLED 10. Substituted 0 with -1 → KILLED 11. Less than to less or equal → KILLED 12. Less than to greater than → KILLED 13. Less than to greater or equal → KILLED 14. Less than to equal → KILLED 15. Less than to not equal → SURVIVED 16. Incremented (a++) integer local variable number 2 → KILLED 17. Decremented (a--) integer local variable number 2 → KILLED 18. Incremented (++a) integer local variable number 2 → KILLED

	19. Decremented (--a) integer local variable number 2 → KILLED
2 2 8	1. removed call to java/lang/Double::<init> → KILLED 2. Negated integer local variable number 2 → KILLED 3. Negated integer local variable number 2 → KILLED 4. Negated double array field → KILLED 5. Incremented (a++) integer local variable number 2 → KILLED 6. Incremented (a++) integer local variable number 2 → KILLED 7. Incremented (a++) double array field → SURVIVED 8. Decremented (a--) integer local variable number 2 → KILLED 9. Decremented (a--) integer local variable number 2 → TIMED_OUT 10. Decremented (a--) double array field → SURVIVED 11. Incremented (++a) integer local variable number 2 → KILLED 12. Incremented (++a) integer local variable number 2 → KILLED 13. Incremented (++a) double array field → KILLED 14. Decremented (--a) integer local variable number 2 → KILLED 15. Decremented (--a) integer local variable number 2 → KILLED 16. Decremented (--a) double array field → KILLED
2 3 0	1. replaced return value with null for org/jfree/data/DataUtilities::createNumberArray → KILLED 2. mutated return of Object value for org/jfree/data/DataUtilities::createNumberArray to (if (x != null) null else throw new RuntimeException) → KILLED
2 4 2	1.

2	1. Negated integer local variable number 1 → KILLED
4	2. Incremented (a++) integer local variable number 1 →
4	KILLED
	3. Decremented (a--) integer local variable number 1 → SURVIVED
	4. Incremented (++a) integer local variable number 1 → KILLED
	5. Decremented (--a) integer local variable number 1 → KILLED

2	1. changed conditional boundary → KILLED
4	2. Changed increment from 1 to -1 → KILLED
5	3. Substituted 0 with 1 → SURVIVED
	4. negated conditional → SURVIVED
	5. removed conditional - replaced comparison check with false → KILLED
	6. removed conditional - replaced comparison check with true → SURVIVED
	7. Negated integer local variable number 3 → KILLED
	8. Negated integer local variable number 1 → SURVIVED
	9. Substituted 0 with 1 → SURVIVED
	10. Substituted 0 with -1 → KILLED
	11. Substituted 0 with 1 → SURVIVED
	12. Substituted 0 with -1 → KILLED
	13. Less than to less or equal → KILLED
	14. Less than to greater than → SURVIVED
	15. Less than to greater or equal → SURVIVED
	16. Less than to equal → SURVIVED
	17. Less than to not equal → SURVIVED
	18. Incremented (a++) integer local variable number 3 → SURVIVED
	19. Incremented (a++) integer local variable number 1 → KILLED
	20. Decremented (a--) integer local variable number 3 → KILLED
	21. Decremented (a--) integer local variable number 1 → SURVIVED
	22. Incremented (++a) integer local variable number 3 → SURVIVED
	23. Incremented (++a) integer local variable number 1 → KILLED

	24. Decremented (--a) integer local variable number 3 → KILLED
	25. Decremented (--a) integer local variable number 1 → SURVIVED
2 4 6	1. removed call to org/jfree/data/DataUtilities::createNumberArray → SURVIVED
	2. Negated integer local variable number 3 → KILLED
	3. Negated integer local variable number 3 → KILLED
	4. Incremented (a++) integer local variable number 3 → SURVIVED
	5. Incremented (a++) integer local variable number 3 → SURVIVED
	6. Decremented (a--) integer local variable number 3 → KILLED
	7. Decremented (a--) integer local variable number 3 → TIMED_OUT
	8. Incremented (++a) integer local variable number 3 → SURVIVED
	9. Incremented (++a) integer local variable number 3 → SURVIVED
	10. Decremented (--a) integer local variable number 3 → KILLED
	11. Decremented (--a) integer local variable number 3 → KILLED
2 4 8	1. replaced return value with null for org/jfree/data/DataUtilities::createNumberArray2D → KILLED 2. mutated return of Object value for org/jfree/data/DataUtilities::createNumberArray2D to (if (x != null) null else throw new RuntimeException) → KILLED
2 6 2	1.
2 6 3	1.

2	1. Substituted 0.0 with 1.0 → KILLED
6	2. Substituted 0.0 with 1.0 → KILLED
4	3. Substituted 0.0 with -1.0 → KILLED
	4. Substituted 0.0 with 1.0 → KILLED
	5. Substituted 0.0 with -1.0 → KILLED

2	1. changed conditional boundary → KILLED
6	2. Substituted 0 with 1 → KILLED
5	3. negated conditional → KILLED
	4. removed call to org/jfree/data/KeyedValues::getItemCount → KILLED
	5. removed conditional - replaced comparison check with false → KILLED
	6. removed conditional - replaced comparison check with true → KILLED
	7. Negated integer local variable number 4 → KILLED
	8. Substituted 0 with 1 → KILLED
	9. Substituted 0 with -1 → KILLED
	10. Substituted 0 with 1 → KILLED
	11. Substituted 0 with -1 → KILLED
	12. Less than to less or equal → KILLED
	13. Less than to greater than → KILLED
	14. Less than to greater or equal → KILLED
	15. Less than to equal → KILLED
	16. Less than to not equal → SURVIVED
	17. Incremented (a++) integer local variable number 4 → KILLED
	18. Decremented (a--) integer local variable number 4 → KILLED
	19. Incremented (++a) integer local variable number 4 → KILLED
	20. Decremented (--a) integer local variable number 4 → KILLED

2	1. removed call to org/jfree/data/KeyedValues::getValue → KILLED
6	2. Negated integer local variable number 4 → KILLED
6	3. Incremented (a++) integer local variable number 4 → KILLED
	4. Decremented (a--) integer local variable number 4 → TIMED_OUT

	5. Incremented (++a) integer local variable number 4 → KILLED
	6. Decremented (--a) integer local variable number 4 → KILLED
2 6 7	1. negated conditional → KILLED 2. removed conditional - replaced equality check with false → KILLED 3. removed conditional - replaced equality check with true → SURVIVED 4. equal to not equal → KILLED
2 6 8	1. Replaced double addition with subtraction → KILLED 2. removed call to java/lang/Number::doubleValue → KILLED 3. Negated double local variable number 2 → KILLED 4. Replaced double operation with first member → KILLED 5. Replaced double operation by second member → KILLED 6. Replaced double addition with subtraction → KILLED 7. Replaced double addition with multiplication → KILLED 8. Replaced double addition with division → KILLED 9. Replaced double addition with modulus → KILLED 10. Incremented (a++) double local variable number 2 → SURVIVED 11. Decremented (a--) double local variable number 2 → SURVIVED 12. Incremented (++a) double local variable number 2 → KILLED 13. Decremented (--a) double local variable number 2 → KILLED
2 7 1	1. Substituted 0.0 with 1.0 → KILLED 2. Substituted 0.0 with 1.0 → KILLED 3. Substituted 0.0 with -1.0 → KILLED 4. Substituted 0.0 with 1.0 → KILLED 5. Substituted 0.0 with -1.0 → KILLED

2 7 2	1. changed conditional boundary → KILLED 2. Substituted 0 with 1 → KILLED 3. negated conditional → KILLED 4. removed call to org/jfree/data/KeyedValues::getItemCount → KILLED 5. removed conditional - replaced comparison check with false → KILLED 6. removed conditional - replaced comparison check with true → KILLED 7. Negated integer local variable number 6 → KILLED 8. Substituted 0 with 1 → KILLED 9. Substituted 0 with -1 → KILLED 10. Substituted 0 with 1 → KILLED 11. Substituted 0 with -1 → KILLED 12. Less than to less or equal → KILLED 13. Less than to greater than → KILLED 14. Less than to greater or equal → KILLED 15. Less than to equal → KILLED 16. Less than to not equal → SURVIVED 17. Incremented (a++) integer local variable number 8 → KILLED 18. Decremented (a--) integer local variable number 6 → KILLED 19. Incremented (++a) integer local variable number 6 → KILLED 20. Decremented (--a) integer local variable number 6 → KILLED
2 7 3	1. removed call to org/jfree/data/KeyedValues::getValue → KILLED 2. Negated integer local variable number 6 → KILLED 3. Incremented (a++) integer local variable number 8 → KILLED 4. Decremented (a--) integer local variable number 6 → KILLED 5. Incremented (++a) integer local variable number 6 → KILLED 6. Decremented (--a) integer local variable number 6 → KILLED

2 7 4	1. negated conditional → KILLED 2. removed conditional - replaced equality check with false → KILLED 3. removed conditional - replaced equality check with true → SURVIVED 4. equal to not equal → KILLED
2 7 5	1. Replaced double addition with subtraction → KILLED 2. removed call to java/lang/Number::doubleValue → KILLED 3. Negated double local variable number 4 → KILLED 4. Replaced double operation with first member → KILLED 5. Replaced double operation by second member → KILLED 6. Replaced double addition with subtraction → KILLED 7. Replaced double addition with multiplication → KILLED 8. Replaced double addition with division → KILLED 9. Replaced double addition with modulus → KILLED 10. Incremented (a++) double local variable number 6 → SURVIVED 11. Decremented (a--) double local variable number 4 → SURVIVED 12. Incremented (++a) double local variable number 4 → KILLED 13. Decremented (--a) double local variable number 4 → KILLED

2	1. removed call to java/lang/Double::<init> → KILLED
7	2. Replaced double division with multiplication → KILLED
7	3. removed call to org/jfree/data/KeyedValues::getKey → KILLED
	4. removed call to org/jfree/data/DefaultKeyedValues::addValue → KILLED
	5. Negated integer local variable number 6 → KILLED
	6. Negated double local variable number 4 → KILLED
	7. Negated double local variable number 2 → KILLED
	8. Replaced double operation with first member → KILLED
	9. Replaced double operation by second member → KILLED
	10. Replaced double division with multiplication → KILLED
	11. Replaced double division with modulus → KILLED
	12. Replaced double division with addition → KILLED
	13. Replaced double division with subtraction → KILLED
	14. Incremented (a++) integer local variable number 8 → KILLED
	15. Incremented (a++) double local variable number 6 → KILLED
	16. Incremented (a++) double local variable number 2 → KILLED
	17. Decremented (a--) integer local variable number 6 → TIMED_OUT
	18. Decremented (a--) double local variable number 4 → KILLED
	19. Decremented (a--) double local variable number 2 → KILLED
	20. Incremented (++a) integer local variable number 6 → KILLED
	21. Incremented (++a) double local variable number 4 → KILLED
	22. Incremented (++a) double local variable number 2 → KILLED
	23. Decremented (--a) integer local variable number 6 → KILLED
	24. Decremented (--a) double local variable number 4 → KILLED
	25. Decremented (--a) double local variable number 2 → KILLED

2 7 9	1. replaced return value with null for org/jfree/data/DataUtilities::getCumulativePercentages → KILLED 2. mutated return of Object value for org/jfree/data/DataUtilities::getCumulativePercentages to (if (x != null) null else throw new RuntimeException) → KILLED

Active mutators

- ABS_MUTATOR
- AOD_1_MUTATOR
- AOD_2_MUTATOR
- AOR_1_MUTATOR
- AOR_2_MUTATOR
- AOR_3_MUTATOR
- AOR_4_MUTATOR
- ARGUMENT_PROPAGATION_MUTATOR
- BOOLEAN_FALSE_RETURN
- BOOLEAN_TRUE_RETURN
- CONDITIONALS_BOUNDARY_MUTATOR
- CONSTRUCTOR_CALL_MUTATOR
- CRCR_1_MUTATOR
- CRCR_2_MUTATOR
- CRCR_3_MUTATOR
- CRCR_4_MUTATOR
- CRCR_5_MUTATOR
- CRCR_6_MUTATOR
- EMPTY_RETURN_VALUES
- EXPERIMENTAL_BIGINTEGER_MUTATOR
- EXPERIMENTAL_MEMBER_VARIABLE_MUTATOR
- EXPERIMENTAL_REMOVE_SWITCH_MUTATOR_[0-99]
- EXPERIMENTAL_SWITCH_MUTATOR
- INCREMENTS_MUTATOR
- INLINE_CONSTANT_MUTATOR
- INVERT_NEGS_MUTATOR
- MATH_MUTATOR
- NAKED_RECEIVER
- NEGATE_CONDITIONALS_MUTATOR
- NON_VOID_METHOD_CALL_MUTATOR

- NULL_RETURN_VALUES
- OBBN_1_MUTATOR
- OBBN_2_MUTATOR
- OBBN_3_MUTATOR
- PRIMITIVE_RETURN_VALS_MUTATOR
- REMOVE_CONDITIONALS_EQUAL_ELSE_MUTATOR
- REMOVE_CONDITIONALS_EQUAL_IF_MUTATOR
- REMOVE_CONDITIONALS_ORDER_ELSE_MUTATOR
- REMOVE_CONDITIONALS_ORDER_IF_MUTATOR
- REMOVE_INCREMENTS_MUTATOR
- RETURN_VALS_MUTATOR
- ROR_1_MUTATOR
- ROR_2_MUTATOR
- ROR_3_MUTATOR
- ROR_4_MUTATOR
- ROR_5_MUTATOR
- UOI_1_MUTATOR
- UOI_2_MUTATOR
- UOI_3_MUTATOR
- UOI_4_MUTATOR
- VOID_METHOD_CALL_MUTATOR

Tests examined

- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datautilities Tests]/[test:testG5CloneComplexSource(org.jfree.data.DatautilitiesTests)] (1 ms)
- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datautilities Tests]/[test:testF4EqualDifferentLength(org.jfree.data.DatautilitiesTests)] (2 ms)
- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datautilities Tests]/[test:testB3CalculateRowTotalNegPosValue(org.jfree.data.Datautilitie sTests)] (3 ms)
- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datautilities Tests]/[test:testG2CloneSingleRowSource(org.jfree.data.DatautilitiesTests)] (2 ms)
- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datautilities Tests]/[test:TestC6CreateNumberArrayNegVal(org.jfree.data.DatautilitiesTe sts)] (3 ms)

- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datau tilitiesTests]/[test:testE4getCumulativePercentagesOneNegVal(org.jfree.data.Dat autilitiesTests)] (2 ms)
- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datau tilitiesTests]/[test:testCalculateRowTotal(org.jfree.data.DatautilitiesTests)] (2 ms)
- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datau tilitiesTests]/[test:testF1EqualBothNull(org.jfree.data.DatautilitiesTests)] (2 ms)
- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datau tilitiesTests]/[test:testF7EqualEmptyArrays(org.jfree.data.DatautilitiesTests)] (2 ms)
- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datau tilitiesTests]/[test:testG4CloneNullRowsSource(org.jfree.data.DatautilitiesTests)] (2 ms)
- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datau tilitiesTests]/[test:testD2createNumberArray2DLen(org.jfree.data.DatautilitiesTest s)] (2 ms)
- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datau tilitiesTests]/[test:testE3getCumulativePercentagesNegVal(org.jfree.data.Datautilit iesTests)] (3 ms)
- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datau tilitiesTests]/[test:testA4CalculateColumnTotalZeroRows(org.jfree.data.Datautilitie sTests)] (3 ms)
- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datau tilitiesTests]/[test:testA1CalculateColumnTotal(org.jfree.data.DatautilitiesTests)] (3 ms)
- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datau tilitiesTests]/[test:testA6InvalidIndex(org.jfree.data.DatautilitiesTests)] (2 ms)
- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datau tilitiesTests]/[test:testB2CalculateRowTotalTwoNegValue(org.jfree.data.Datautilitie sTests)] (2 ms)
- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datau tilitiesTests]/[test:testG1CloneEmptySource(org.jfree.data.DatautilitiesTests)] (10 ms)
- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datau tilitiesTests]/[test:testE1getCumulativePercentagesValid(org.jfree.data.Datautilitie sTests)] (2 ms)
- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datau tilitiesTests]/[test:testB1CalculateRowTotalValid(org.jfree.data.DatautilitiesTests)] (3 ms)

- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datau tilitiesTests]/[test:testF2EqualFirstNull(org.jfree.data.DatautilitiesTests)] (2 ms)
- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datau tilitiesTests]/[test:testF6EqualSameArrays(org.jfree.data.DatautilitiesTests)] (2 ms)
- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datau tilitiesTests]/[test:testE2getCumulativePercentagesForOneVal(org.jfree.data.Data utilitiesTests)] (2 ms)
- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datau tilitiesTests]/[test:TestC1createNumberArrayVal(org.jfree.data.DatautilitiesTests)] (7 ms)
- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datau tilitiesTests]/[test:testCalculateRowTotal_SetTotalToZero(org.jfree.data.Datautilitie sTests)] (3 ms)
- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datau tilitiesTests]/[test:testB5NegativeRow(org.jfree.data.DatautilitiesTests)] (4 ms)
- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datau tilitiesTests]/[test:testA3CalculateColumnTotalNegPos(org.jfree.data.DatautilitiesT ests)] (3 ms)
- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datau tilitiesTests]/[test:testB6InvalidRow(org.jfree.data.DatautilitiesTests)] (3 ms)
- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datau tilitiesTests]/[test:testA2CalculateColumnTotalTwoNeg(org.jfree.data.Datautilities Tests)] (3 ms)
- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datau tilitiesTests]/[test:TestC5CreateNumberArrayOne(org.jfree.data.DatautilitiesTests)] (3 ms)
- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datau tilitiesTests]/[test:testA5CalculateColumnTotalNegativeRow(org.jfree.data.Datautil itiesTests)] (3 ms)
- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datau tilitiesTests]/[test:testF3EqualSecondNull(org.jfree.data.DatautilitiesTests)] (2 ms)
- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datau tilitiesTests]/[test:testB4CalculateRowTotalZeroColumn(org.jfree.data.Datautilities Tests)] (4 ms)
- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datau tilitiesTests]/[test:testG3CloneMultipleRowsSource(org.jfree.data.DatautilitiesTest s)] (2 ms)

- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datau tilitiesTests]/[test:testF5EqualDifferentValues(org.jfree.data.DatautilitiesTests)] (2 ms)
- org.jfree.data.DatautilitiesTests.[engine:junit-vintage]/[runner:org.jfree.data.Datau tilitiesTests]/[test:TestC2createNumberArrayLen(org.jfree.data.DatautilitiesTests)] (4 ms)

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