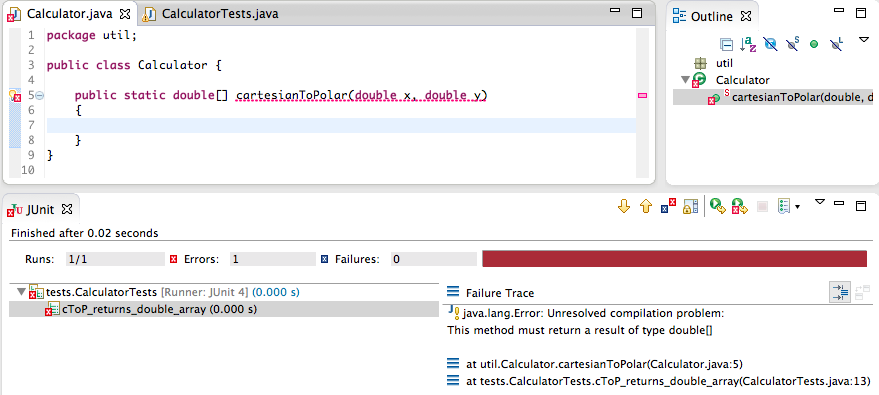
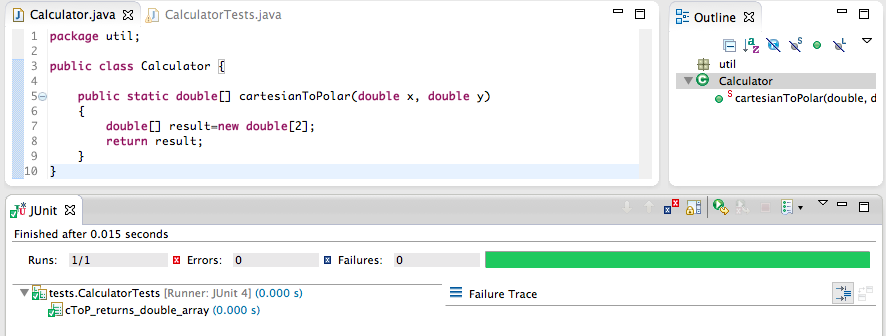
**ECSE 428 Assignment B  
Amee Joshipura (260461226)  
Lilly Tong (260459522)  
  
JUnit Test Cases & Screen shots**

**Test 1  
Test name:** cToP\_returns\_double\_array **Call setup**: cartesianToPolar(3,4) **Expected:** cartesianToPolar() returns a double array

**Fail:**



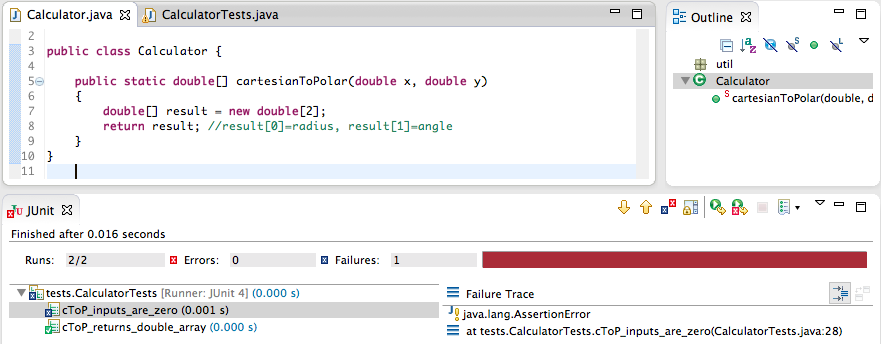
**Succeed:**



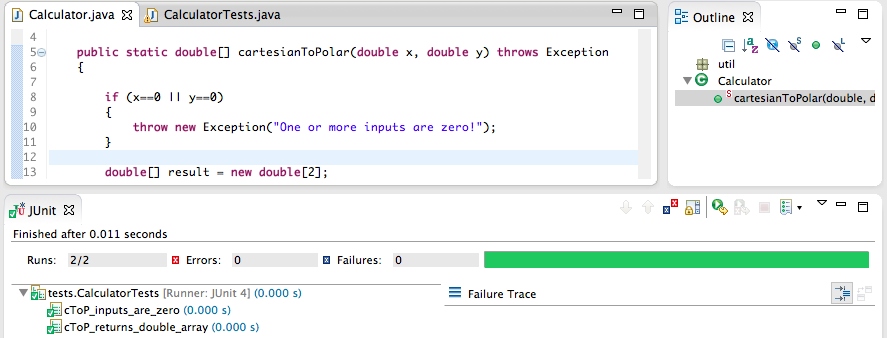
**Test 2**

**Test name:** cToP\_inputs\_are\_zero

**Call setup**: cartesianToPolar(0,0) **Expected:** cartesianToPolar() throws exception with message “One or more inputs are zero!”

**Fail:**  


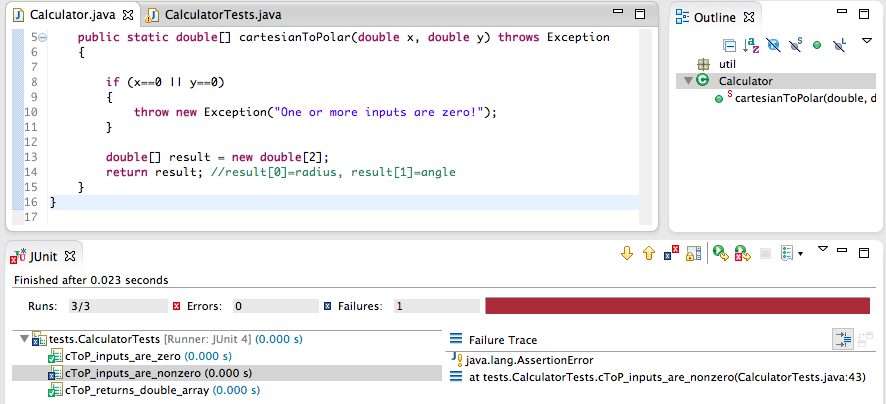
**Succeed:**



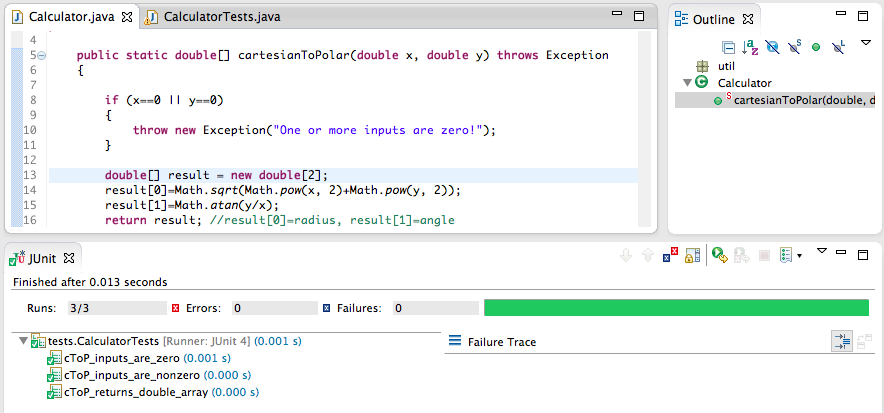
**Test 3**

**Test name:** cToP\_inputs\_are\_nonzero

**Call setup**: cartesianToPolar(3,4) **Expected:** cartesianToPolar() returns [5, arctan(4.0/3.0)]  
  
**Fail:**



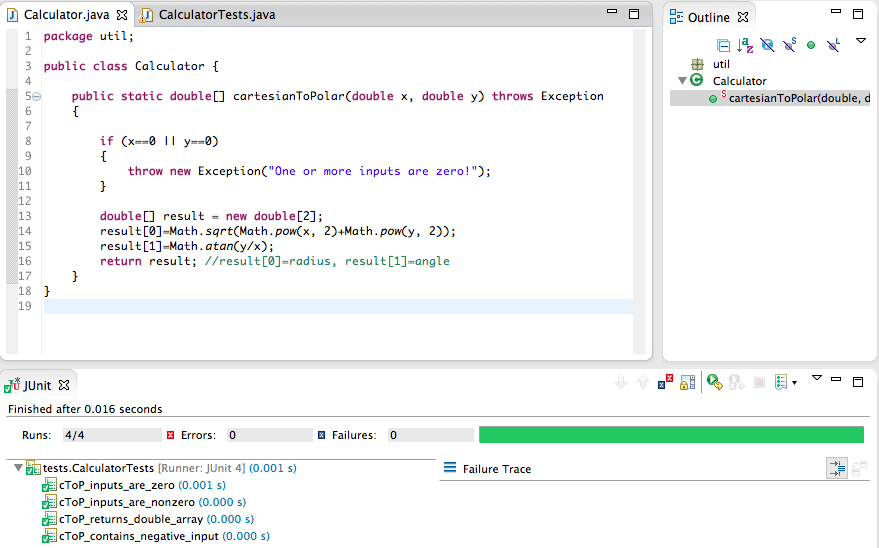
**Succeed:**



**Test 4**

**Test name:** cToP\_contains\_negative\_input

**Call setup**: cartesianToPolar(3,-4) **Expected:** cartesianToPolar() returns [5, arctan(-4.0/3.0)]  
  
**Succeed:**

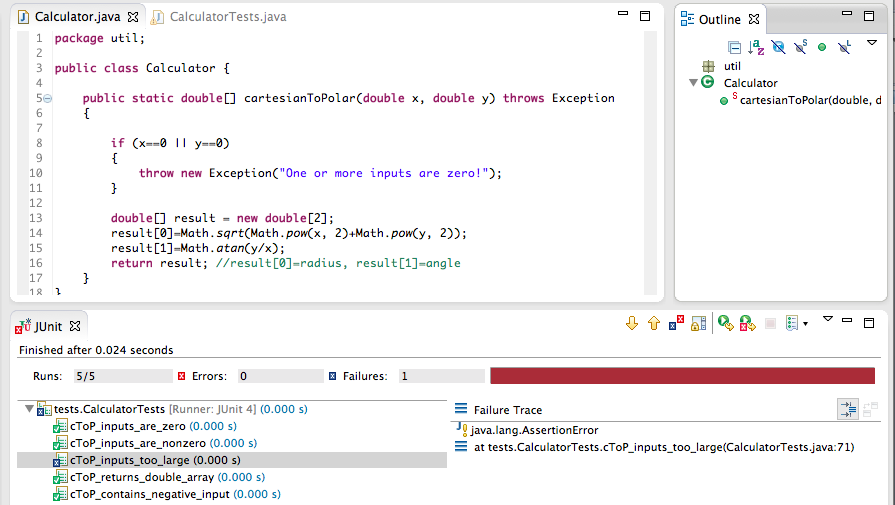


**Test 5**

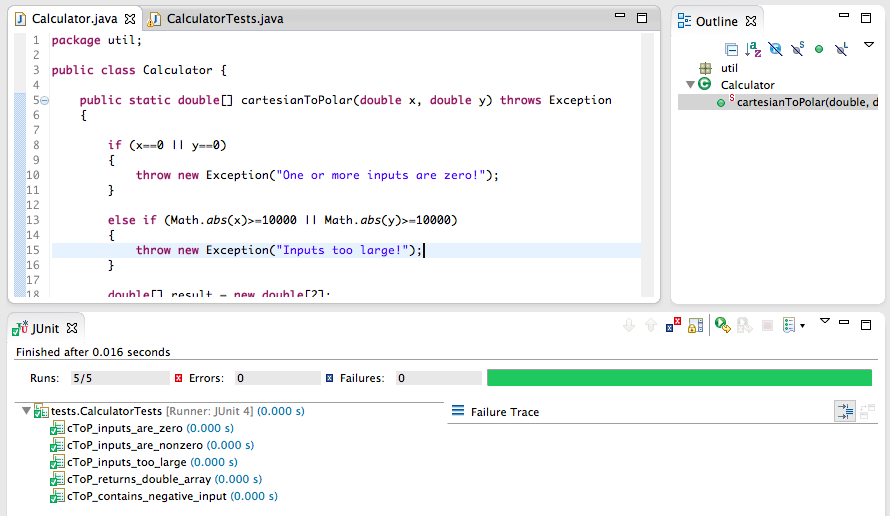
**Test name:** cToP\_inputs\_too\_large

**Call setup**: cartesianToPolar(10000,-10000) **Expected:** cartesianToPolar() throws exception with message “Inputs too large!”

**Fail:**



**Succeed:**

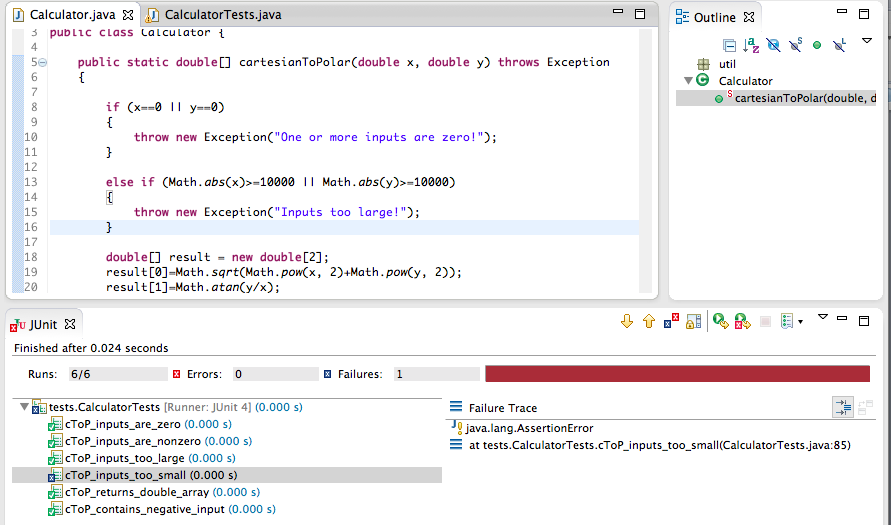


**Test 6**

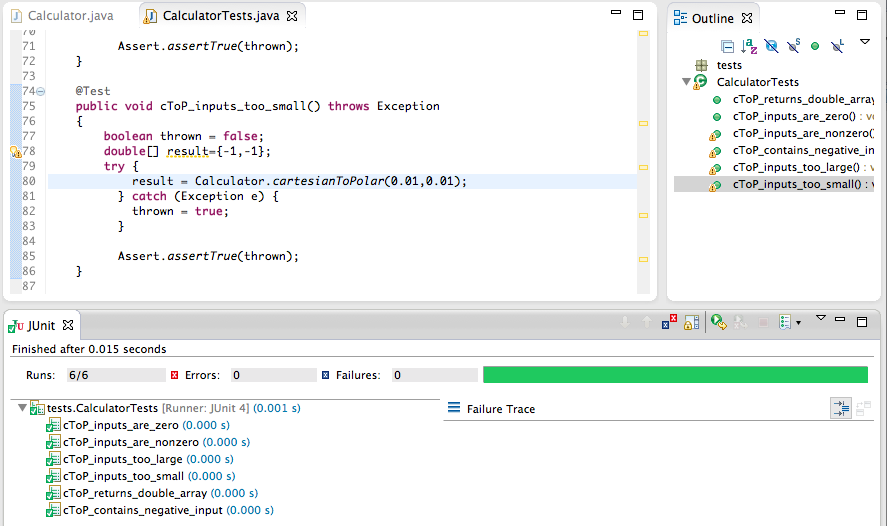
**Test name:** cToP\_inputs\_too\_small

**Call setup**: cartesianToPolar(0.01,-0.01) **Expected:** cartesianToPolar() throws exception with message “Inputs too small!”

**Fail:**



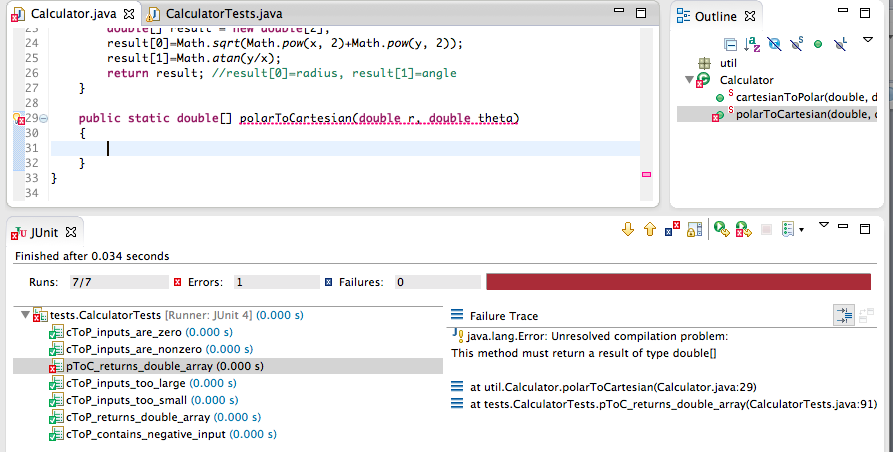
**Succeed:**



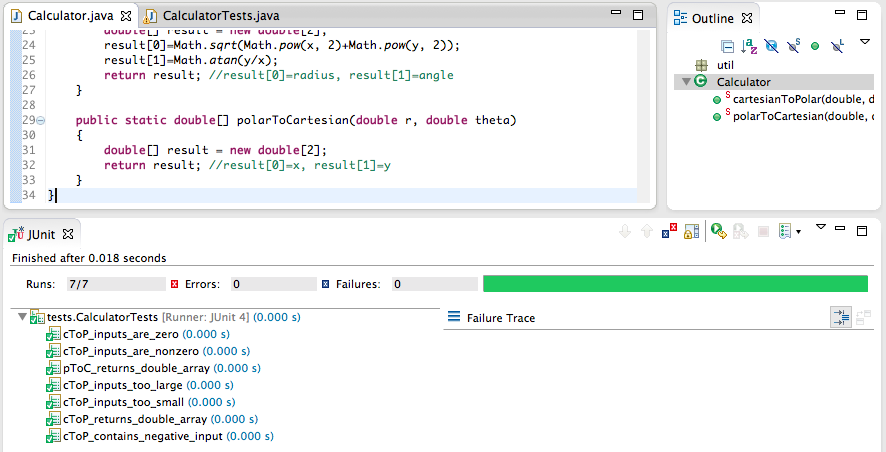
**Test 7**

**Test name:** pToC\_returns\_double\_array **Call setup**: polarToCartesian(3,0.5) **Expected:** polarToCartesian() returns a double array

**Fail:**



**Succeed:**

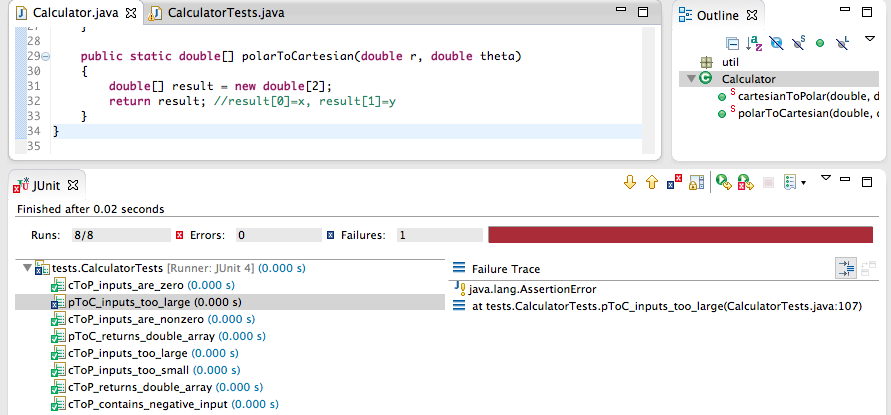


**Test 8**

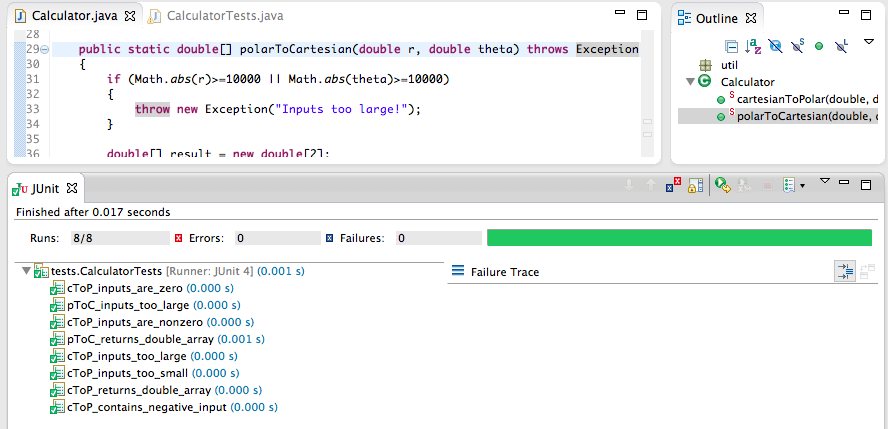
**Test name:** pToC\_inputs\_too\_large

**Call setup**: polarToCartesian(10000,-10000) **Expected:** polarToCartesian () throws exception with message “Inputs too large!”

**Fail:**



**Succeed:**

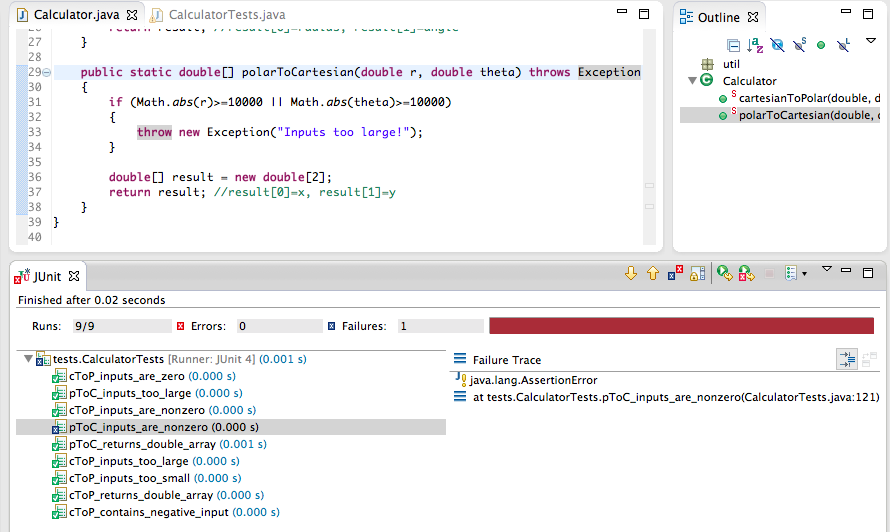


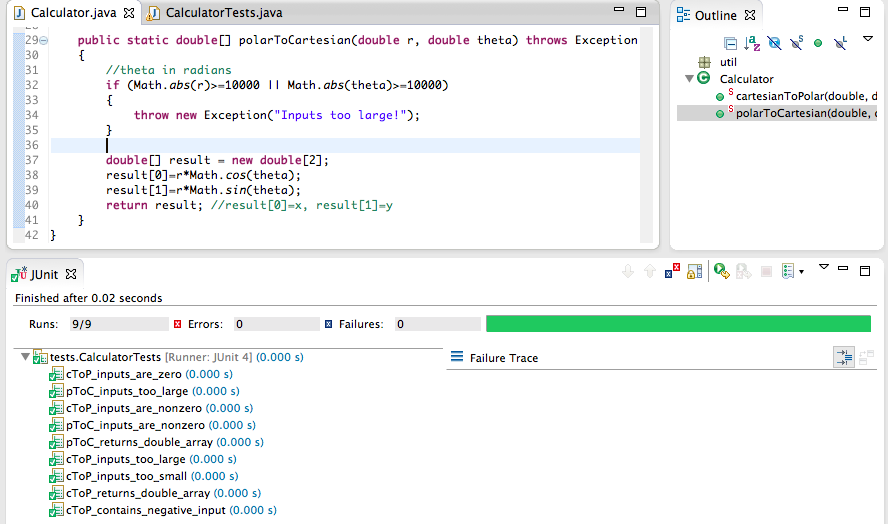
**Test 9**

**Test name:** pToC\_inputs\_are\_nonzero

**Call setup**: polarToCartesian(5,arctan(4/3)) **Expected:** polarToCartesian() returns [3,4]

**Fail:**



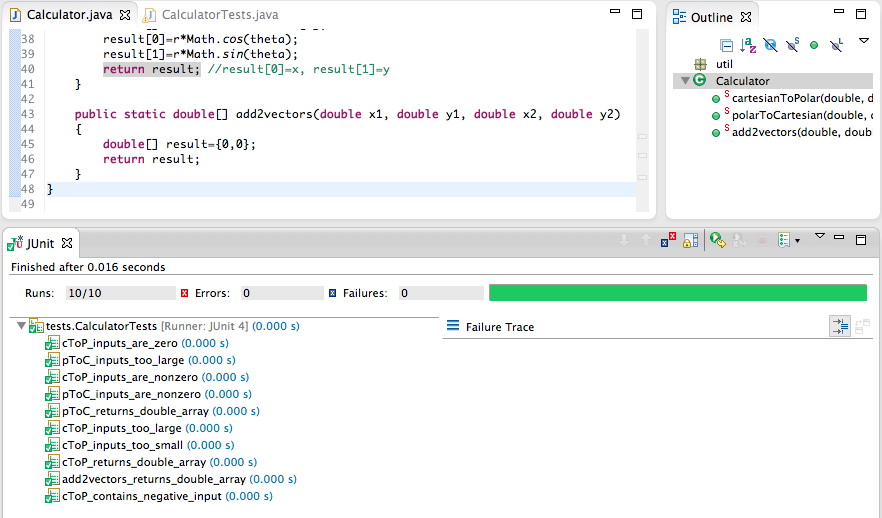
**Succeed:**  


**Test 10**

**Test name:** add2vectors\_returns\_double\_array

**Call setup**: add2vectors(3,4,5,6) **Expected:** add2vectors() returns a double array

**Succeed:**

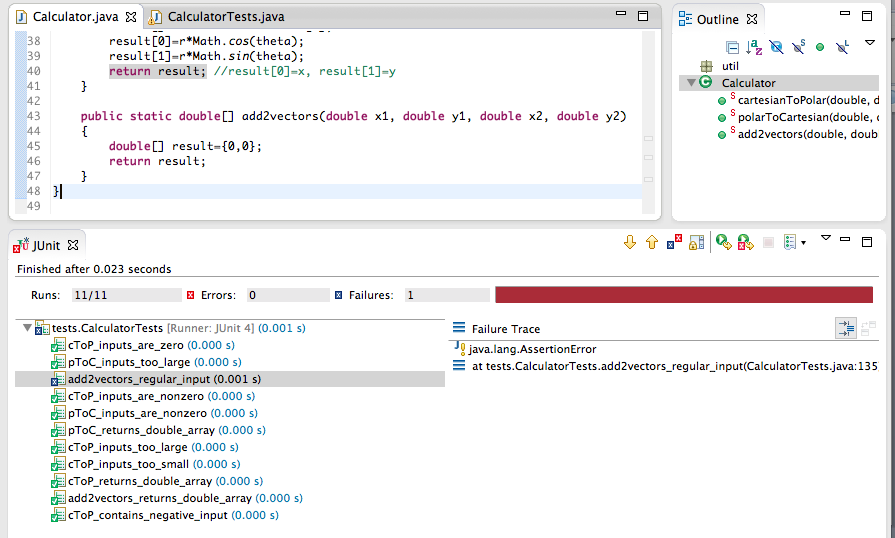


**Test 11**

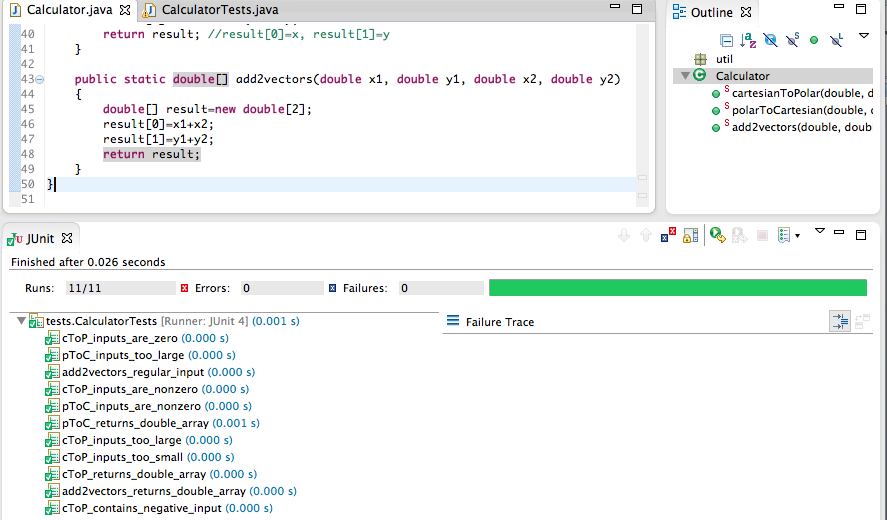
**Test name:** add2vectors\_regular\_input

**Call setup:** add2vectors(3,4,5,6)

**Expected:** add2vectors() returns [8,10]  
  
**Fail:**



**Succeed:**

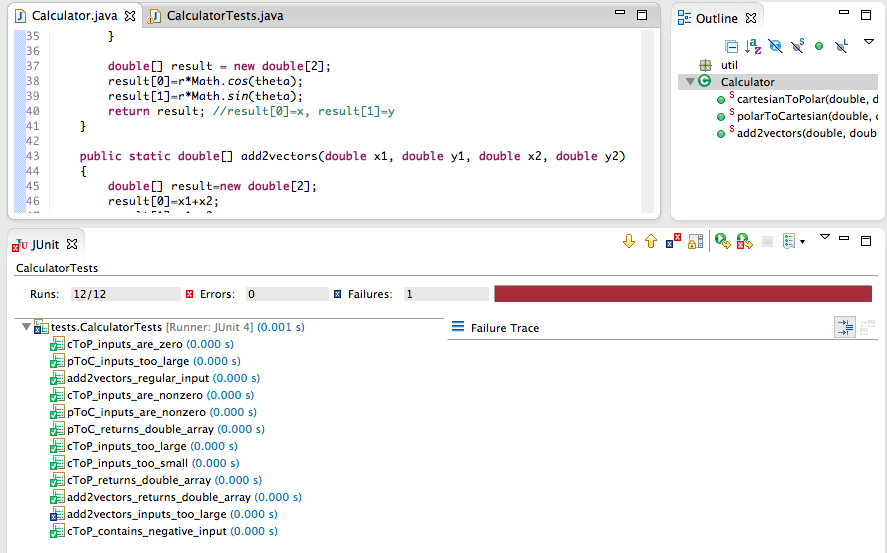


**Test 12**

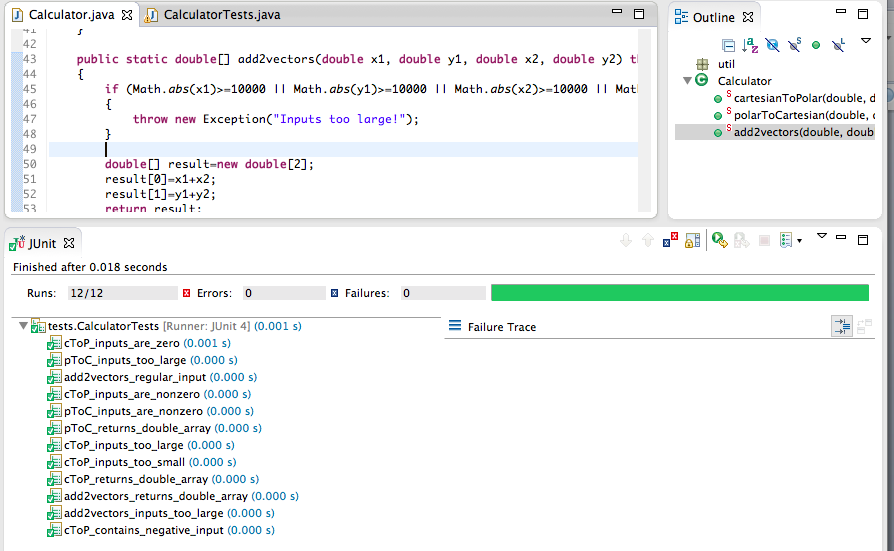
**Test name:** add2vectors\_inputs\_too\_large

**Call setup**: add2vectors(10000,-10000,10000,-10000) **Expected:** add2vectors() throws exception with message “Inputs too large!”

**Fail:**



**Succeed:**

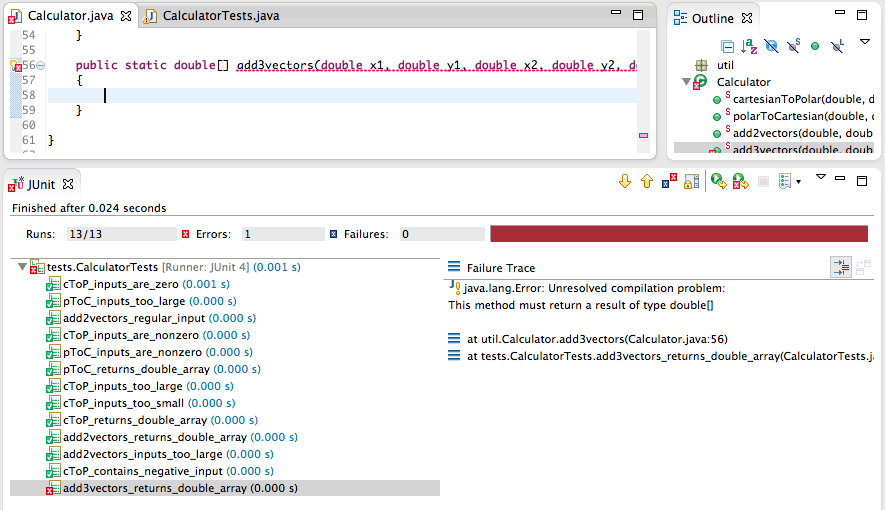


**Test 13**

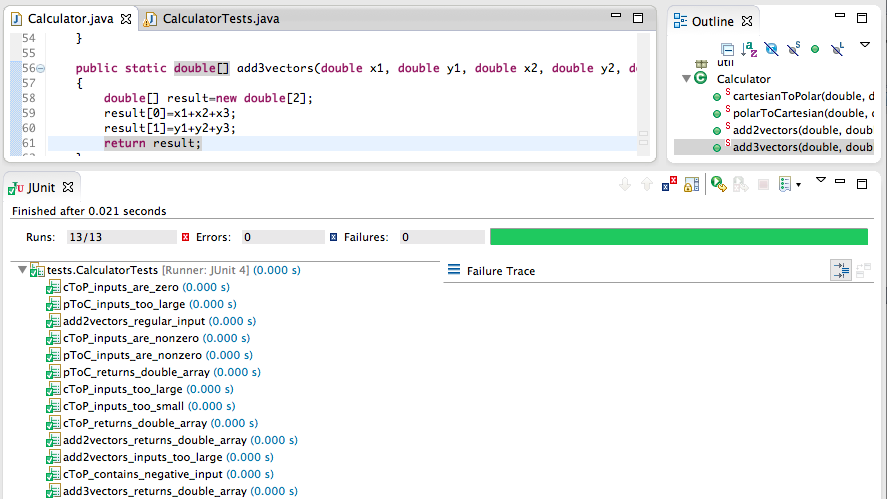
**Test name:** add3vectors\_returns\_double\_array

**Call setup**: add3vectors(3,4,5,6,7,8) **Expected:** add3vectors() returns a double array

**Fail:**



**Succeed:**



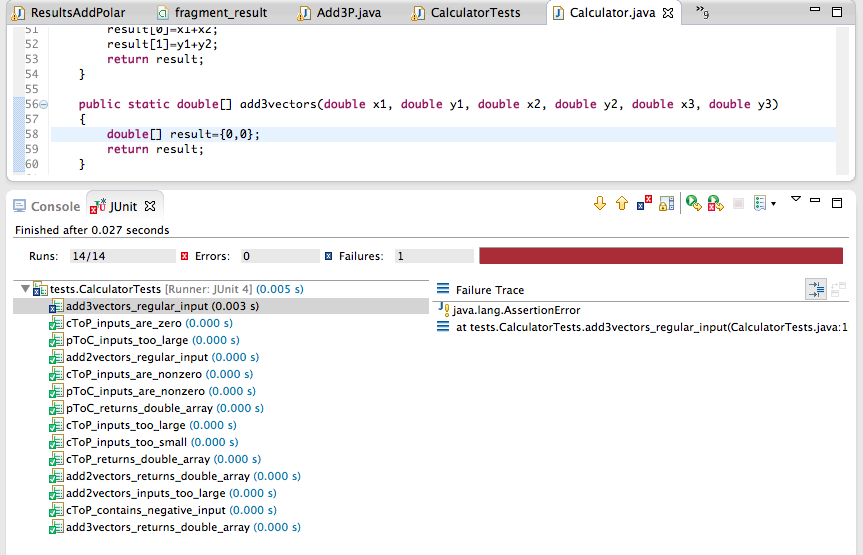
**Test 14**

**Test name:** add3vectors\_regular\_input

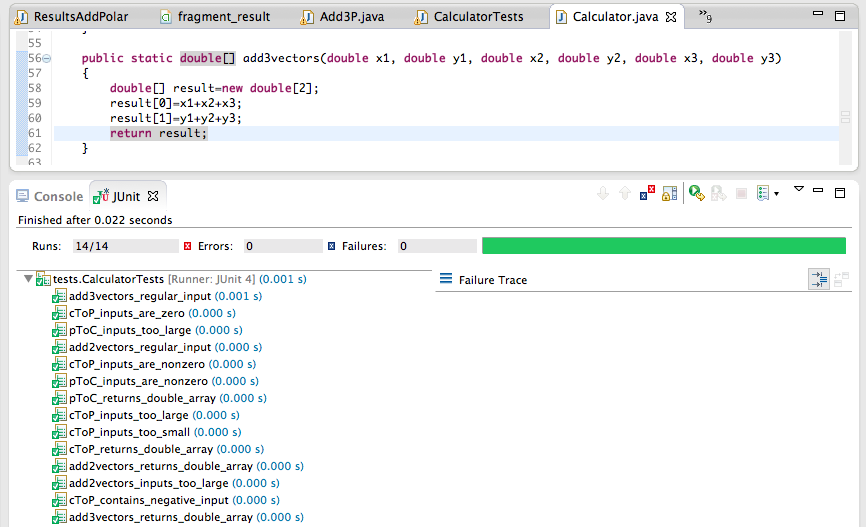
**Call setup:** add3vectors(3,4,5,6,7,8)

**Expected:** add2vectors() returns [15,18]

**Fail:**



**Succeed:**

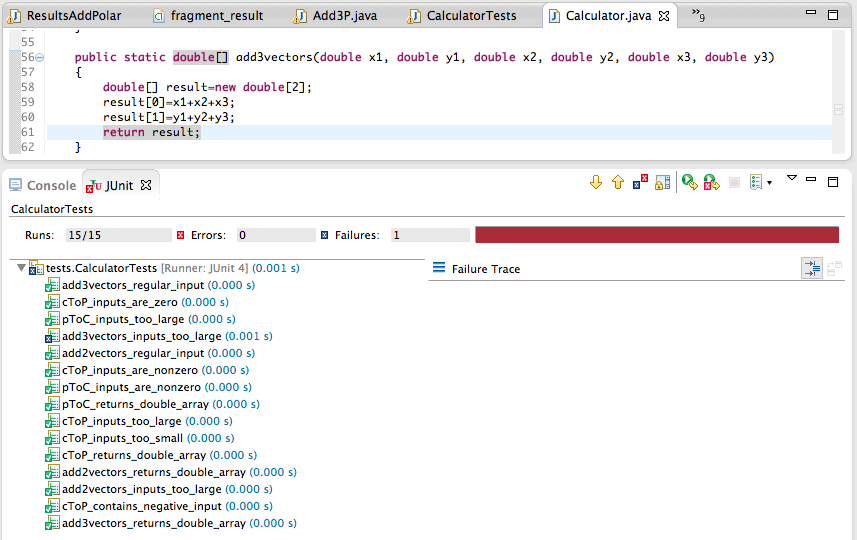


**Test 15**

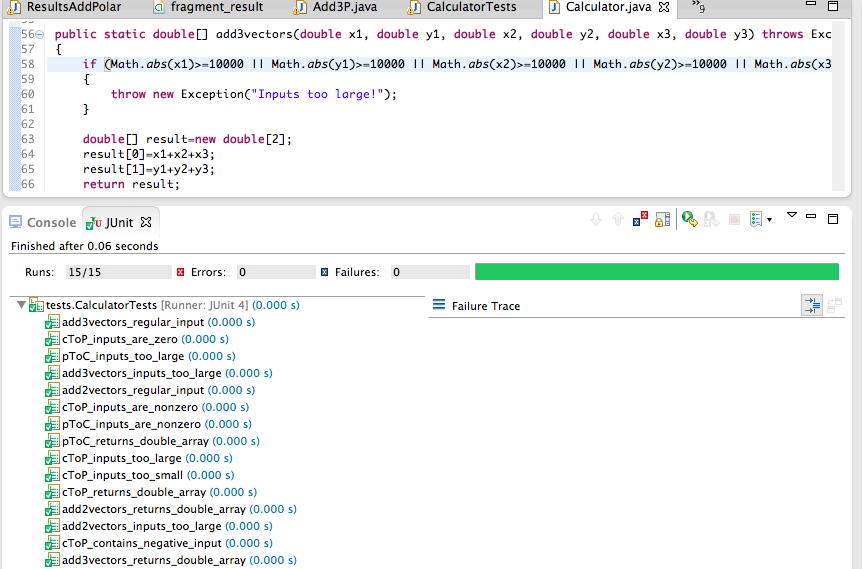
**Test name:** add3vectors\_inputs\_too\_large

**Call setup**: add3vectors(10000,-10000,10000,-10000,10000,-10000) **Expected:** add3vectors() throws exception with message “Inputs too large!”

**Fail:**

****

**Succeed:**

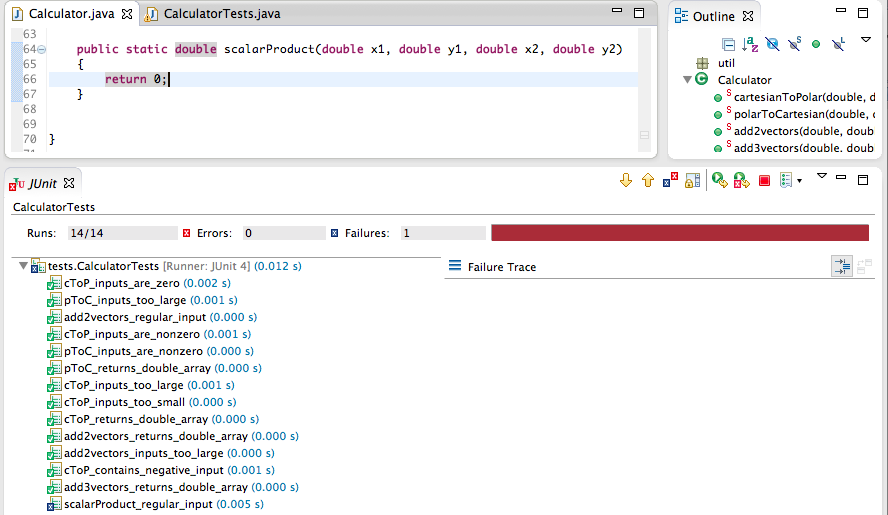
****

**Test 16**

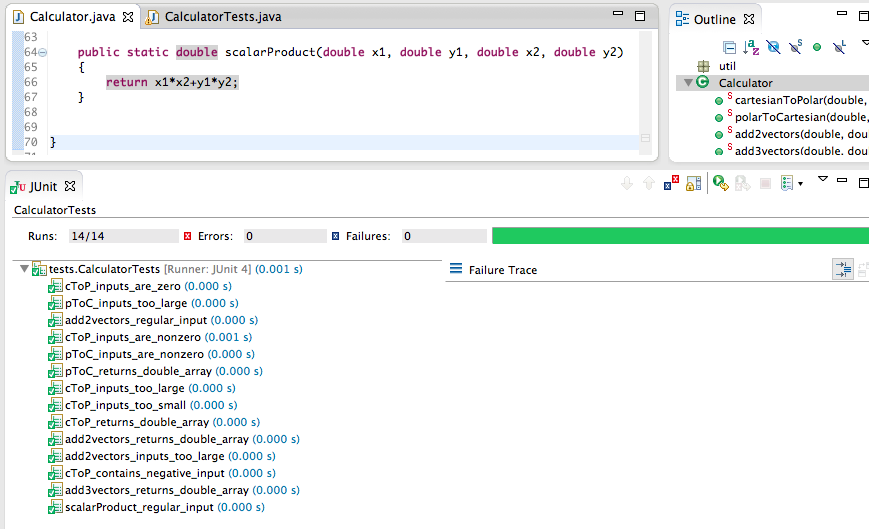
**Test name:** scalarProduct\_regular\_input

**Call setup**: scalarProduct(3,4,5,6) **Expected:** scalarProduct() returns a 39

**Fail:**



**Succeed:**

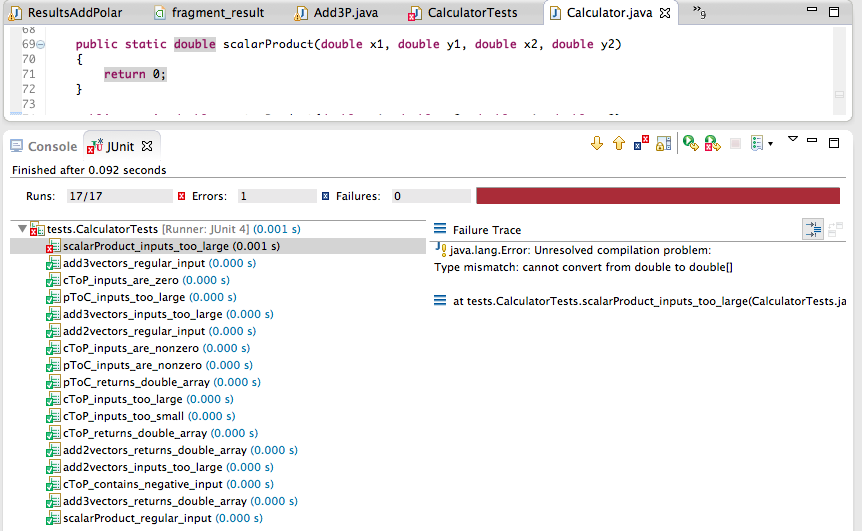


**Test 17**

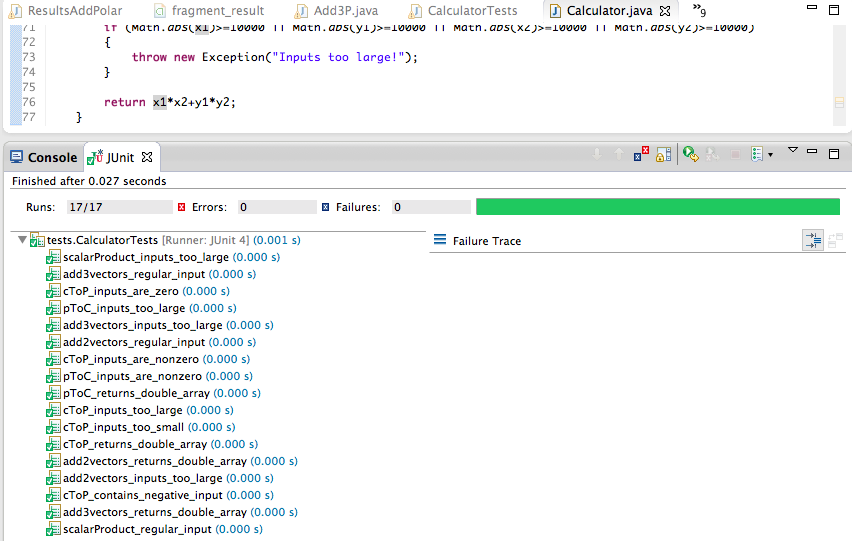
**Test name:** scalarProduct\_inputs\_too\_large

**Call setup**: scalarProduct(10000,-10000,10000,-10000) **Expected:** scalarProduct() throws exception with message “Inputs too large!”

**Fail:**



**Succeed:**

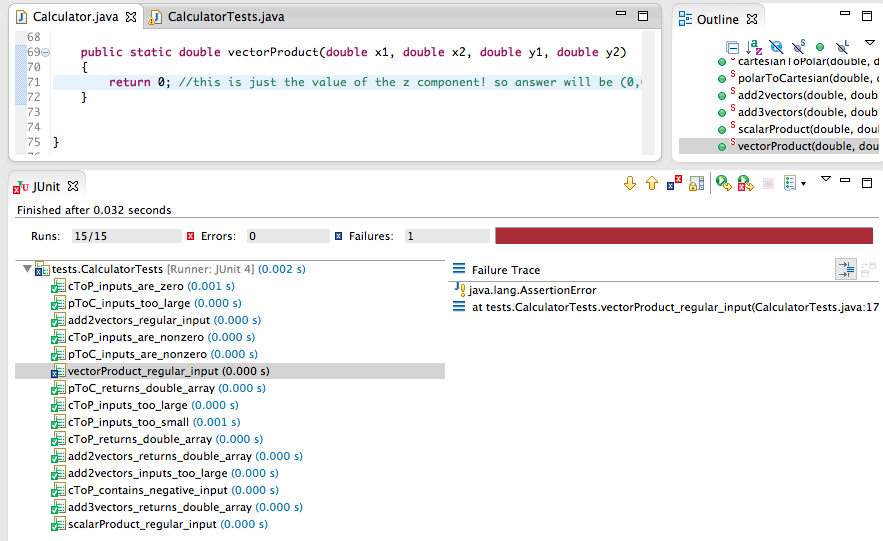


**Test 18**

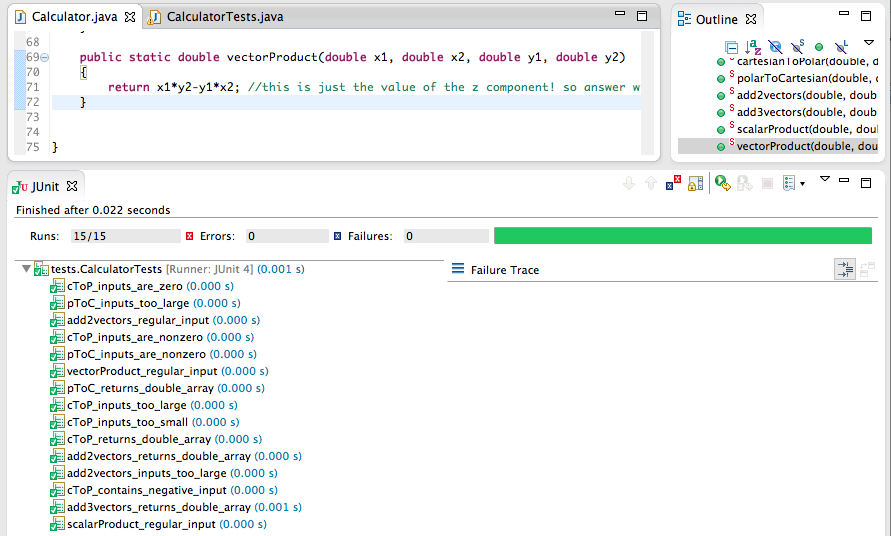
**Test name:** vectorProduct\_regular\_input

**Call setup**: vectorProduct(3,4,5,6) **Expected:** vectorProduct() returns a -2

**Fail:**



**Succeed:**

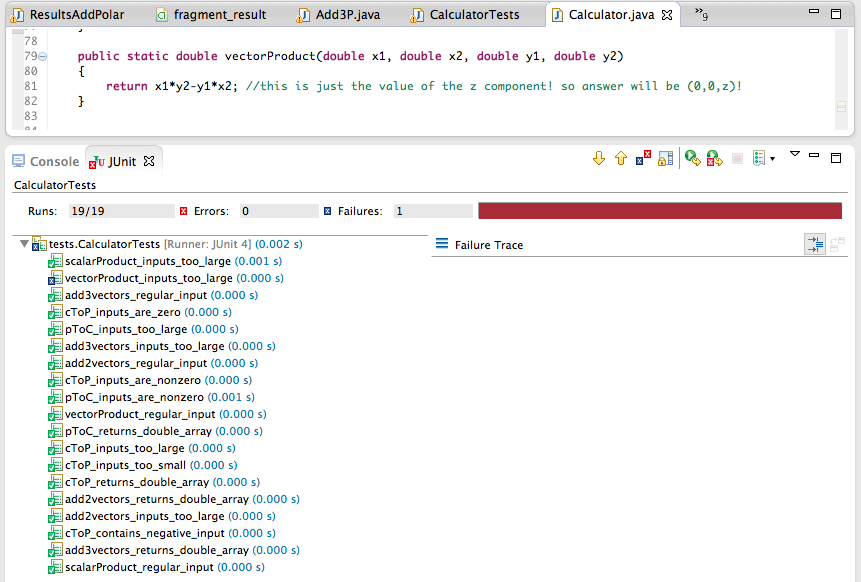


**Test 19**

**Test name:** vectorProduct\_inputs\_too\_large

**Call setup**: vectorProduct(10000,-10000,10000,-10000) **Expected:** vectorProduct() throws exception with message “Inputs too large!”

**Fail:**



**Succeed:**

