Tax Calculator Testing Documentation

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| Test No. | Class | Test Element | Test Description | Test Data | Expected Result | Actual Result | Comment |
| 1 | TaxCalculator | if (store <= 100) | Ensure function only calculates tax values less than or equal to 100 | 0, 50, 100 | **0:**  0  **50:**  0  **100:**  0 | **0:**  0  **50:**  0  **100:**  0 | Pass |
| 2 | TaxCalculator | if (store >= 101.0 && store <= 150.0) | Ensure function only calculates tax values greater than or equal to 101 & less than or equal to 150 | 101, 125, 150 | **101:**  0 (tax rounded down)  **125:**  3  **150:**  5 | **101:**  0 (tax rounded down)  **125:**  3  **150:**  5 | Pass |
| 3 | TaxCalculator | if (store >= 151.0 && store <= 200.0) | Ensure function only calculates tax values greater than or equal to 151 & less than or equal to 200 | 151, 175, 200 | **151:**  5  **175:**  10  **200:**  15 | **151:**  5  **175:**  10  **200:**  15 | Pass |
| 4 | TaxCalculator | if (store >= 201.0 && store <= 300.0) | Ensure function only calculates tax values greater than or equal to 201 & less than or equal to 300 | 201, 250, 300 | **201:**  15  **250:**  35  **300:**  55 | **201:**  15  **250:**  35  **300:**  55 | Pass |
| 5 | TaxCalculator | if (store >= 301.0 && store <= 400.0) | Ensure function only calculates tax values greater than or equal to 301 & less than or equal to 400 | 301, 350, 400 | **301:**  56  **350:**  85  **400:**  115 | **301:**  56  **350:**  85  **400:**  115 | Pass |
| 6 | TaxCalculator | if (store >= 401.0) | Ensure function only calculates tax values greater than or equal to 401 | 401, 450, 500 | **401:**  116  **450:**  175  **500:**  235 | **401:**  116  **450:**  175  **500:**  235 | Pass |
| 7 | TaxCalculator | iRemaining | Ensure the variable is equal to the income minus taxPayable | 125, 250, 500 | **125:**  122  **250:**  215  **500:**  265 | **125:**  122  **250:**  215  **500:**  265 | Pass |
| 8 | TaxCalculator | System.out.println("Tax Payable: £" + taxPayable(income))  &  System.out.println("Remaining Income: £" + returnIncome(income) | Ensure each function prints their specified values | 130, 275, 320 | **130:**  Tax Payable: ￡3  Remaining Income: ￡127  **275:**  Tax Payable: ￡45  Remaining Income: ￡230  **320:**  Tax Payable: ￡67  Remaining Income: ￡253 | **130:**  Tax Payable: ￡3  Remaining Income: ￡127  **275:**  Tax Payable: ￡45  Remaining Income: ￡230  **320:**  Tax Payable: ￡67  Remaining Income: ￡253 | Pass |
| 9 | TaxChart | X Axis | Ensure X axis is appropriately defined | x.changeSize(400, 4);  x.moveVertical(400); | Height of X axis will increase by 200 | Height of X axis increased by 200 | Pass |
| 10 | TaxChart | Y Axis | Ensure Y axis is appropriately defined | y.changeSize(4, 400); | Width of Y axis will increase by 200 | Width of Y axis increased by 200 | Pass |
| 11 | TaxChart | Graph Proportionality returnIncome | Ensure graph is proportional to given value | value.moveHorizontal(i / 4);  value.moveVertical((-TaxCalculator.returnIncome(i) / 4) + 200);  value.changeSize(4, (TaxCalculator.returnIncome(i) /4)); | Graph will be proportional to i/4 | Graph was proportional to i/4 | Pass |

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| 12 | TaxChart | Graph Proportionality taxPayable | Ensure graph is proportional to given value | tValue.moveHorizontal(i / 4);  tValue.moveVertical((-TaxCalculator.taxPayable(i) / 4) + 200 + (-TaxCalculator.returnIncome(i) / 4));  tValue.changeSize(4, (TaxCalculator.taxPayable(i) / 4)); | Graph will be proportional to i/4 | Graph was proportional to i/4 | Pass |
| 13 | TaxChart & BOGOFF | INCOMES | Ensure the constant value of INCOMES is consistent with its use | public static int[] INCOMES = { 35, 60, 110, 135, 160, 175, 200, 225, 250, 275, 300, 325, 350, 375, 400, 425, 450,  500, 550 }; | **TaxChart**:  Graph values will change  Table values will change  **BOGOFF:**  Graph values will be drawn proportionally  Table values will be printed proportionally | **TaxChart**:  Graph values changed  Table values changed  **BOGOFF:**  Graph values drawn proportionally    Table values printed proportionally |  |
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