Problem 6

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| **Identifier** | EN\_01 |
| **Statement** | As a user I want to check the exact value of golden ratio up to 10 decimal places to check a number with closest approximation to φ. |
| **Constraints** | The calculator should be in its initialized state, I.e. the user should press “CLR” key to clear the previous result on display. |
| **Acceptance Criteria** | In order to check the value of golden ratio, the user presses “φ” key. The result should be equal to 1.6180339887. |
| **Priority** | Must have. |
| **Estimate** | 1 |

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| **Identifier** | EN\_02 |
| **Statement** | As a user, I should be able to find whether a given rectangle is golden rectangle or not. |
| **Constraints** | User should enter positive numbers as input. |
| **Acceptance Criteria** | * The user divides length of the rectangle with the width of the rectangle. * The result will display. * The user will press “φ” key and then “=” key. * If the result is equal to φ, “YES” is displayed on the screen, else “NO” is displayed. |
| **Priority** | Must have |
| **Estimate** | 3 |

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| **Identifier** | EN\_03 |
| **Statement** | As a user I want to edit my input I.e. delete wrongly entered digits or correct the input during my calculation. |
| **Constraints** | The user can only delete or correct the values to input before pressing “=” key, I.e. before evaluating the result. |
| **Acceptance Criteria** | Given that the user wants to calculate the sum of 4 numbers   * User inputs 5+1+4+7 * User moves the cursor to 4 and deletes it by pressing “DEL” key. * User enters 2 and then presses “=” key. * The result 15 is displayed. |
| **Priority** | Must have |
| **Estimate** | 2 |

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| **Identifier** | EN\_04 |
| **Statement** | As a user I want to do a new calculation by applying the operations on the previous result evaluated. |
| **Constraints** | The user should press “=” key before applying operations on the evaluated result. |
| **Acceptance Criteria** | * The previous result displayed is 25. * The user wants to apply division on this evaluated result. * User will press “+” and then “5” key. * New result 5 is displayed. |
| **Priority** | Must have. |
| **Estimate** | 5 |

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| **Identifier** | EN\_05 |
| **Statement** | As a user I want to store the operations performed in memory (in the order they were executed), so that they can be used later for reference or for other calculations |
| **Constraints** | The operations saved are lost after the calculator is turned off. |
| **Acceptance Criteria** | * The user presses “CLR” key. * User performs multiple operations. * User stores the operations by pressing “SAV” key. * Operations get stored in the order they were performed. |
| **Priority** | Should have |
| **Estimate** | 2 |

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| **Identifier** | EN\_06 |
| **Statement** | As a user I want the calculator to give results in maximum decimal places so that I can round numbers up or down to the desirable decimal place. |
| **Constraints** | Not applicable |
| **Acceptance Criteria** | Given the user wants to multiply two numbers.   * User inputs operation 2.14565\*3.17775 * The result 6.81833929 (up to 8 decimal places) is displayed. |
| **Priority** | Must have |
| **Estimate** | 1 |

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| **Identifier** | EN\_07 |
| **Statement** | As a user I want to apply operations of addition, subtraction, multiplication or division in a row on a chain of numbers and then calculate the result in the end. |
| **Constraints** | Not applicable |
| **Acceptance Criteria** | Given the user wants to do the following calculation:   * User inputs “2\*4\*2+5/10”. * User presses “=” key. * The result “2.1” is displayed. |
| **Priority** | Should have |
| **Estimate** | 3 |

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| **Identifier** | EN\_08 |
| **Statement** | As a user I want to solve equations on the calculator that has solves math equations that add, subtract, multiply and divide positive and negative numbers and exponential numbers while using brackets. |
| **Constraints** | The results are in a math order of operation BODMAS. |
| **Acceptance Criteria** | * User inputs “(15-(-5))/2”. * User presses “=” key. * The result “10” is displayed. |
| **Priority** | Could have |
| **Estimate** | 5 |