Tests – Generate Secure Password

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Password Length | Complexity Options | Expected Outcome | Expected Result (Pass/Fail) | Actual Outcome | Actual Result (Pass/Fail) | Figure Number |
| 5 | None Selected | 5 character password with only lowercase letters | Pass |  |  |  |
| 6 | Use of Lower Case | 6 character password with only lowercase letters | Pass |  |  |  |
| 7 | Use of Upper Case | 7 character password with only uppercase letters | Pass |  |  |  |
| 8 | Use of Numbers | 8 character password with only numbers | Pass |  |  |  |
| 9 | Use of Special Characters | 9 character password with only special characters | Pass |  |  |  |
| 10 | Use of Lower Case, Use of Upper Case | 10 character password with a mix of lower and upper case letters | Pass |  |  |  |
| 11 | Use of Numbers, Use of Special Case | 11 character password with a mix of numbers and special cases | Pass |  |  |  |
| 12 | Use of Lower Case, Use of Upper Case, Use of Numbers, Use of Special Case | 12 character password with a mix of lower case letters, upper case letters, numbers, and special characters | Pass |  |  |  |
| Blank |  | Reprompt for length | Fail |  |  |  |

Test – Calculate and Format A Percentage

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Numerator | Denominator | Decimal Point Formatting | Expected Outcome | Expected Result (Pass/Fail) | Actual Outcome | Actual Result (Pass/Fail) | Figure Number |
| 22 | 57 | 3 | 38.596 | Pass |  |  |  |
| 9 | 10 | 5 | 90.00000 | Pass |  |  |  |
| 125 | 159753 | 6 | 0.000782 | Pass |  |  |  |
| 159753 | 125 | 2 | 1278.02 | Pass |  |  |  |
| Blank |  |  | Reprompt for numerator | Fail |  |  |  |
| 22 | Blank |  | Reprompt for denominator | Fail |  |  |  |
| 22 | 57 | Blank | Reprompt for denominator | Fail |  |  |  |

Test – Days Until July 4, 2025

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Date | Expected Day Count | Expected Result (Pass/Fail) | Actual Day Count | Actual Result (Pass/Fail) | Figure Number |
| July 4, 2024 | 365 | Pass |  |  |  |
| January 1, 2000 | 9316 | Pass |  |  |  |
| December 31, 2025 | Error – Date is in the future | Fail |  |  |  |

Test – Law of Cosines and Triangle Leg Calculation

Formula: Side C2 = Side A2 + Side B2 – 2(Side A)(Side B)(Cos(angle c))

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Side A | Side B | Angle C | Expected Outcome | Expected Result (Pass/Fail) | Actual Outcome | Actual Result (Pass/Fail) | Figure Number |
| 8 | 11 | 37 | 6.67 | Pass |  |  |  |
| 15 | 21 | 89 | 25.59 | Pass |  |  |  |
| 100 | 100 | 100 | 153.21 | Pass |  |  |  |
| Blank |  |  | Reprompt for Side A | Fail |  |  |  |
| 8 | Blank |  | Reprompt for Side B | Fail |  |  |  |
| 8 | 11 | Blank | Reprompt for Angle C | Fail |  |  |  |

Tests – Volume Of A Right Circular Cylinder

Formula: volume = pi(radius2)(height)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Radius | Height | Expected Volume | Expected Result(Pass/Fail) | Actual Volume | Actual Result (Pass/Fail) | Figure Number |
| 15 | 12 | 8482.30 | Pass |  |  |  |
| 8 | 2 | 402.12 | Pass |  |  |  |
| 1 | 1 | 3.14 | Pass |  |  |  |
| Blank |  | Reprompt for radius | Fail |  |  |  |
| 15 | Blank | Reprompt for height | Fail |  |  |  |