TEST CASE: Renderer – Linear Functions

Method of Testing: Manual

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| **S.N** | **EXECUTION STEPS** | **EXPECTED RESULTS** |
| 1 | Enter the linear function x in the Display function field and click Draw button. | Line should appear originating at 0 and intersect with point (1,1) with a slope of 1. |
| 2 | Enter the linear function x/2 + 1 in the Display function field and click Draw Button | Line should appear originating at 1 and intersecting with point (2,1.5) with a slope of ½. |
| 3 | Enter the function 5 + x in the Display function field and click Draw button. | Line originates from 5 and intersects point (1,6) with a slope of 1. |

TEST CASE: Renderer – Quadratic Functions

Method of Testing: Manual

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| **S.N** | **EXECUTION STEPS** | **EXPECTED RESULTS** |
| 1 | Enter the quadratic function x^2 in the Display field and click Draw button. | Curved line originates from the point of origin and intersects with point (1,1) and approaches infinity. |
| 2 | Enter the quadratic function x^2 + 5 in the Display field and click Draw Button. | Curved line originates from 5 and intersects with point (1,6) and approaches infinity. |
| 3 | Enter the quadratic function 20\*x^2 + x + 1 in the Display field and click Draw button. | Curved line originates from 1 and intersects with point (.5,6) with a slope of 20/1. |

TEST CASE: Renderer – Polynomial Functions

Method of Testing: Manual

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| **S.N** | **EXECUTION STEPS** | **EXPECTED RESULTS** |
| 1 | Enter the polynomial 5xy^2 – 3x + 5y^3 – 3 in the Display field and click Draw button. | Line originating at -3 and intersects with point (1,-6) with a slope of -1.5/1. |
| 2 | Enter polynomial x^3 in the Display function field and click Draw button. | A curved line should appear with a change of concavity at the origin and 1 curve intersecting the point (1,1) and the other curve intersecting the point (-1,-1).. |