|  |  |
| --- | --- |
| **f(x) = x** |  |
| Domain  (interval) |  |
| Range  (interval) |  |
| Increasing  interval(s) |  |
| Decreasing  interval(s) |  |
| Positive  interval(s) |  |
| Negative  interval(s) |  |
| x-intercept(s) |  |
| y-intercept(s) |  |
| Does the graph go through the origin? |  |
| End behavior |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Linear**  **f(x) = x**  **Table of Values**  Choose two positive values, two negative values, and zero for **x**   |  |  | | --- | --- | | **x** | **y** | |  |  | |  |  | |  |  | |  |  | |  |  | | Sketch the graph of the function accurately and neatly. Use a ruler if necessary!  Related image |

|  |  |
| --- | --- |
| **f(x) = |x|** |  |
| Domain  (interval) |  |
| Range  (interval) |  |
| Increasing  interval(s) |  |
| Decreasing  interval(s) |  |
| Positive  interval(s) |  |
| Negative  interval(s) |  |
| x-intercept(s) |  |
| y-intercept(s) |  |
| Does the graph go through the origin? |  |
| End behavior |  |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **AbsoluteValue**  **f(x) = |x|**  **Table of Values**  Choose two positive values, two negative values, and zero for **x**   |  |  | | --- | --- | | **x** | **y** | |  |  | |  |  | |  |  | |  |  | |  |  | | Sketch the graph of the function accurately and neatly. Use a ruler if necessary!  Related image |

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|  |  |
| Domain  (interval) |  |
| Range  (interval) |  |
| Increasing  interval(s) |  |
| Decreasing  interval(s) |  |
| Positive  interval(s) |  |
| Negative  interval(s) |  |
| x-intercept(s) |  |
| y-intercept(s) |  |
| Does the graph go through the origin? |  |
| End behavior |  |

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| **Polynomial**  **(Quadratic)**  **f(x) = x²**  **Table of Values**  Choose two positive values, two negative values, and zero for **x**   |  |  | | --- | --- | | **x** | **y** | |  |  | |  |  | |  |  | |  |  | |  |  | | Sketch the graph of the function accurately and neatly. Use a ruler if necessary!  Related image |

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|  |  |
| Domain  (interval) |  |
| Range  (interval) |  |
| Increasing  interval(s) |  |
| Decreasing  interval(s) |  |
| Positive  interval(s) |  |
| Negative  interval(s) |  |
| x-intercept(s) |  |
| y-intercept(s) |  |
| Does the graph go through the origin? |  |
| End behavior |  |

|  |  |
| --- | --- |
| **f(x) = x²** |  |
| Domain  (interval) |  |
| Range  (interval) |  |
| Increasing  interval(s) |  |
| Decreasing  interval(s) |  |
| Positive  interval(s) |  |
| Negative  interval(s) |  |
| x-intercept(s) |  |
| y-intercept(s) |  |
| Does the graph go through the origin? |  |
| End behavior |  |

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| **Radical**  **(Square Root)**    **Table of Values**  Use reasonable values for **x**   |  |  | | --- | --- | | **x** | **y** | |  |  | |  |  | |  |  | |  |  | |  |  | | Sketch the graph of the function accurately and neatly. Use a ruler if necessary!  Related image |

|  |  |
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|  |  |
| Domain  (interval) |  |
| Range  (interval) |  |
| Increasing  interval(s) |  |
| Decreasing  interval(s) |  |
| Positive  interval(s) |  |
| Negative  interval(s) |  |
| x-intercept(s) |  |
| y-intercept(s) |  |
| Does the graph go through the origin? |  |
| End behavior |  |

|  |  |
| --- | --- |
| **f(x) =** |  |
| Domain  (interval) |  |
| Range  (interval) |  |
| Increasing  interval(s) |  |
| Decreasing  interval(s) |  |
| Positive  interval(s) |  |
| Negative  interval(s) |  |
| x-intercept(s) |  |
| y-intercept(s) |  |
| Does the graph go through the origin? |  |
| End behavior |  |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Polynomial**  **(Cubic)**  **f(x) = x³**  **Table of Values**  Choose two positive values, two negative values, and zero for **x**   |  |  | | --- | --- | | **x** | **y** | |  |  | |  |  | |  |  | |  |  | |  |  | | Sketch the graph of the function accurately and neatly. Use a ruler if necessary!  Related image |

|  |  |
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|  |  |
| Domain  (interval) |  |
| Range  (interval) |  |
| Increasing  interval(s) |  |
| Decreasing  interval(s) |  |
| Positive  interval(s) |  |
| Negative  interval(s) |  |
| x-intercept(s) |  |
| y-intercept(s) |  |
| Does the graph go through the origin? |  |
| End behavior |  |

|  |  |
| --- | --- |
| **f(x) = x³** |  |
| Domain  (interval) |  |
| Range  (interval) |  |
| Increasing  interval(s) |  |
| Decreasing  interval(s) |  |
| Positive  interval(s) |  |
| Negative  interval(s) |  |

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| **Radical**  **(Cube Root)**    **Table of Values**  Choose two positive values, two negative values, and zero for **x**   |  |  | | --- | --- | | **x** | **y** | |  |  | |  |  | |  |  | |  |  | |  |  | | Sketch the graph of the function accurately and neatly. Use a ruler if necessary!  Related image |

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| --- | --- |
|  |  |
| Domain  (interval) |  |
| Range  (interval) |  |
| Increasing  interval(s) |  |
| Decreasing  interval(s) |  |
| Positive  interval(s) |  |
| Negative  interval(s) |  |
| x-intercept(s) |  |
| y-intercept(s) |  |
| Does the graph go through the origin? |  |
| End behavior |  |

|  |  |
| --- | --- |
| **f(x) =** |  |
| Domain  (interval) |  |
| Range  (interval) |  |
| Increasing  interval(s) |  |
| Decreasing  interval(s) |  |
| Positive  interval(s) |  |
| Negative  interval(s) |  |
| x-intercept(s) |  |
| y-intercept(s) |  |
| Does the graph go through the origin? |  |
| End behavior |  |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Exponential**  **Growth**  **f(x) =**  **Table of Values**  Choose two positive values, two negative values, and zero for **x**   |  |  | | --- | --- | | **x** | **y** | |  |  | |  |  | |  |  | |  |  | |  |  | | Sketch the graph of the function accurately and neatly. Use a ruler if necessary!  Related image |

|  |  |
| --- | --- |
| **f(x) =** |  |
| Domain  (interval) |  |
| Range  (interval) |  |
| Increasing  interval(s) |  |
| Decreasing  interval(s) |  |
| Positive  interval(s) |  |
| Negative  interval(s) |  |
| x-intercept(s) |  |
| y-intercept(s) |  |
| Does the graph go through the origin? |  |
| End behavior |  |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Logarithm**  **f(x) = logx**  **Table of Values**  Use the values in the table for **x**   |  |  | | --- | --- | | **x** | **y** | | **100** |  | | **10** |  | | **1** |  | | **0.1** |  | | **0.01** |  | | Sketch the graph of the function accurately and neatly. Use a ruler if necessary!  Related image |

|  |  |
| --- | --- |
| **f(x) = logx** |  |
| Domain  (interval) |  |
| Range  (interval) |  |
| Increasing  interval(s) |  |
| Decreasing  interval(s) |  |
| Positive  interval(s) |  |
| Negative  interval(s) |  |
| x-intercept(s) |  |
| y-intercept(s) |  |
| Does the graph go through the origin? |  |
| End behavior |  |

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| **Exponential**  **Decay**    **Table of Values**  Choose two positive values, two negative values, and zero for **x**   |  |  | | --- | --- | | **x** | **y** | |  |  | |  |  | |  |  | |  |  | |  |  | | Sketch the graph of the function accurately and neatly. Use a ruler if necessary!  Related image |

|  |  |
| --- | --- |
|  |  |
| Domain  (interval) |  |
| Range  (interval) |  |
| Increasing  interval(s) |  |
| Decreasing  interval(s) |  |
| Positive  interval(s) |  |
| Negative  interval(s) |  |
| x-intercept(s) |  |
| y-intercept(s) |  |
| Does the graph go through the origin? |  |
| End behavior |  |