**Domain & Range**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Domain:**  All the x-values you can use.  All Real Numbers \_\_\_\_\_ | **Range:**  All the y-values you can get out.   |  | | --- | | If both arrows point \_\_\_\_,  **y \_\_\_\_\_ y-coordinate**  (from \_\_\_\_\_ value) | | If both arrows point \_\_\_\_,  **y \_\_\_\_\_ y-coordinate**  (from \_\_\_\_\_ value) | | If arrows point \_\_\_\_\_ directions, \_\_\_\_\_\_\_\_ | |

**Intercepts**

|  |  |
| --- | --- |
| **X-Intercept:**  the point (\_\_\_\_). The x-coordinate from the x-intercept is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the polynomial. | **Y-Intercept:**  the point (\_\_\_\_). There will \_\_\_\_\_\_\_ be one. |

**Intervals of Increase/Decrease**

|  |  |
| --- | --- |
| **Increase:**  the \_\_\_\_\_\_\_ of the graph where it goes \_\_\_\_\_ from \_\_\_\_\_\_\_\_\_ to \_\_\_\_\_\_\_\_\_. | **Decrease:** the \_\_\_\_\_\_\_\_\_\_ of the graph where it goes \_\_\_\_\_\_\_\_\_\_ from \_\_\_\_\_\_\_\_ to \_\_\_\_\_\_\_\_\_. |
| Join multiple intervals with a "\_\_\_\_\_\_."  The \_\_\_\_ stands for \_\_\_\_\_\_\_. | |

**Absolute Maximum/Minimum**

|  |  |
| --- | --- |
| **Absolute Maximum:** the \_\_\_\_\_\_\_\_\_\_ point of \_\_\_\_\_\_\_\_ the points on the graph. | **Absolute Minimum:** the \_\_\_\_\_\_\_\_\_\_ point of \_\_\_\_\_\_\_\_ the points on the graph. |

**Relative Maximum/Minimum**

|  |  |
| --- | --- |
| **Relative Maximum:** the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ on a \_\_\_\_\_\_. | **Relative Minimum:**  the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ on a \_\_\_\_\_\_. |

**Even/Odd/Neither Functions**

|  |  |
| --- | --- |
| **Even:**  have \_\_\_\_\_\_\_\_\_ about the \_\_\_\_\_\_\_.  [If you folded the graph along the y-axis, the left side and right side would overlap.] | **Odd:**  have \_\_\_\_\_\_\_\_ about the \_\_\_\_\_\_\_\_.  [If you folded the graph along the x & y-axis, the graph would overlap itself.] |
| **If a function is not even or odd, it is neither.** | |

**End Behavior:**

Describes what f(x) does if you could follow the graph FOREVER!



\*If the arrow points up, use \_\_\_\_\_\_\_\_\_\_.

\*If the arrow points down, use \_\_\_\_\_\_\_.

**If a characteristic does not exist, write \_\_\_\_\_\_\_.**

|  |  |  |
| --- | --- | --- |
| Example # 1: | | |
|  | | |
| Domain: \_\_\_\_\_\_\_\_\_  Range: \_\_\_\_\_\_\_\_\_\_  x-intercept: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  zeros: \_\_\_\_\_\_\_\_\_\_\_  y-intercept: \_\_\_\_\_\_  Intervals of Increase: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Intervals of Decrease: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | Relative Maximum: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Relative Minimum: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Absolute Maximum: \_\_\_\_\_\_\_\_\_\_\_\_\_\_  Absolute Minimum: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Even/Odd/Neither: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  End Behavior: |
| Example # 2: | | |
|  | | |
| Domain: \_\_\_\_\_\_\_\_\_  Range: \_\_\_\_\_\_\_\_\_\_  x-intercept: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  zeros: \_\_\_\_\_\_\_\_\_\_\_  y-intercept: \_\_\_\_\_\_  Intervals of Increase: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Intervals of Decrease: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Relative Maximum: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Relative Minimum: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Absolute Maximum: \_\_\_\_\_\_\_\_\_\_\_\_\_\_  Absolute Minimum: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Even/Odd/Neither: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  End Behavior: | |