Graphing: Exponential Decay Functions

Graph and analyze the following exponential growth functions. Your graph should accurately show the y –intercept and the asymptote. Determine at least two additional points on the right side of the graph. USE A PENCIL!

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [image] f(x) = x

|  |  |
| --- | --- |
| x | f(x) |
| -2 |  |
| -1 |  |
| 0 |  |
| 1 |  |
| 2 |  |

y-intercept \_\_\_\_\_\_\_\_ asymptote \_\_\_\_\_\_\_\_\_domain \_\_\_\_\_\_\_\_ range \_\_\_\_\_\_\_\_\_ end behavior: as x → +$\infty $, f(x) → \_\_\_\_\_\_\_\_\_\_, and  as x → -$\infty $, f(x) → \_\_\_\_\_\_\_\_\_\_[image] | [image]2. f(x) = - x

|  |  |
| --- | --- |
| x | f(x) |
| -2 |  |
| -1 |  |
| 0 |  |
| 1 |  |
| 2 |  |

y-intercept \_\_\_\_\_\_\_\_ asymptote \_\_\_\_\_\_\_\_\_domain \_\_\_\_\_\_\_\_ range \_\_\_\_\_\_\_\_\_\_ end behavior: as x → +$\infty $, f(x) → \_\_\_\_\_\_\_\_\_\_, and   as x → -$\infty $, f(x) → \_\_\_\_\_\_\_\_\_\_[image] |
| 3. f(x) = x + 4

|  |  |
| --- | --- |
| x | f(x) |
| -2 |  |
| -1 |  |
| 0 |  |
| 1 |  |
| 2 |  |

y-intercept \_\_\_\_\_\_\_\_ asymptote \_\_\_\_\_\_\_\_\_domain \_\_\_\_\_\_\_\_ range \_\_\_\_\_\_\_\_\_ end behavior: as x → +$\infty $, f(x) → \_\_\_\_\_\_\_\_\_\_, and  as x → -$\infty $, f(x) → \_\_\_\_\_\_\_\_\_\_ | 4. f(x) = x - 3

|  |  |
| --- | --- |
| x | f(x) |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| 5 |  |

y-intercept \_\_\_\_\_\_\_\_ asymptote \_\_\_\_\_\_\_\_\_domain \_\_\_\_\_\_\_\_ range \_\_\_\_\_\_\_\_\_ end behavior: as x → +$\infty $, f(x) → \_\_\_\_\_\_\_\_\_\_, and   as x → -$\infty $, f(x) → \_\_\_\_\_\_\_\_\_\_ |

Graphing: Exponential Decay Functions Practice

Graph and analyze the following exponential growth functions. Your graph should accurately show the y –intercept and the asymptote. Determine at least two additional points on the right side of the graph. USE A PENCIL!

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [image]1. f(x) = x - 2

|  |  |
| --- | --- |
| x | f(x) |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |

y-intercept \_\_\_\_\_\_\_\_ asymptote \_\_\_\_\_\_\_\_\_domain \_\_\_\_\_\_\_\_ range \_\_\_\_\_\_\_\_\_ end behavior: as x → +$\infty $, f(x) → \_\_\_\_\_\_\_\_\_\_, and  as x → -$\infty $, f(x) → \_\_\_\_\_\_\_\_\_\_[image] | [image]2. f(x) = -x + 8

|  |  |
| --- | --- |
| x | f(x) |
| -2 |  |
| -1 |  |
| 0 |  |
| 1 |  |
| 2 |  |

y-intercept \_\_\_\_\_\_\_\_ asymptote \_\_\_\_\_\_\_\_\_domain \_\_\_\_\_\_\_\_ range \_\_\_\_\_\_\_\_\_\_ end behavior: as x → +$\infty $, f(x) → \_\_\_\_\_\_\_\_\_\_, and   as x → -$\infty $, f(x) → \_\_\_\_\_\_\_\_\_\_[image] |
| 3. f(x) = x + 2 + 9

|  |  |
| --- | --- |
| x | f(x) |
| -4 |  |
| -3 |  |
| -2 |  |
| -1 |  |
| 0 |  |

y-intercept \_\_\_\_\_\_\_\_ asymptote \_\_\_\_\_\_\_\_\_domain \_\_\_\_\_\_\_\_ range \_\_\_\_\_\_\_\_\_ end behavior: as x → +$\infty $, f(x) → \_\_\_\_\_\_\_\_\_\_, and  as x → -$\infty $, f(x) → \_\_\_\_\_\_\_\_\_\_ | 4. f(x) = -x - 1 + 5

|  |  |
| --- | --- |
| x | f(x) |
| -1 |  |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 |  |

y-intercept \_\_\_\_\_\_\_\_ asymptote \_\_\_\_\_\_\_\_\_domain \_\_\_\_\_\_\_\_ range \_\_\_\_\_\_\_\_\_ end behavior: as x → +$\infty $, f(x) → \_\_\_\_\_\_\_\_\_\_, and   as x → -$\infty $, f(x) → \_\_\_\_\_\_\_\_\_\_ |