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 → +, f(x) → \_\_\_\_\_\_\_\_\_\_, and    as x → -, 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 → +, f(x) → \_\_\_\_\_\_\_\_\_\_, and      as x → -, 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 → +, f(x) → \_\_\_\_\_\_\_\_\_\_, and    as x → -, f(x) → \_\_\_\_\_\_\_\_\_\_ | 4. f(x) = x - 3   |  |  | | --- | --- | | x | f(x) | | 1 |  | | 2 |  | | 3 |  | | 4 |  | | 5 |  |   y-intercept \_\_\_\_\_\_\_\_ asymptote \_\_\_\_\_\_\_\_\_  domain \_\_\_\_\_\_\_\_ range \_\_\_\_\_\_\_\_\_    end behavior: as x → +, f(x) → \_\_\_\_\_\_\_\_\_\_, and      as x → -, 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 → +, f(x) → \_\_\_\_\_\_\_\_\_\_, and    as x → -, 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 → +, f(x) → \_\_\_\_\_\_\_\_\_\_, and      as x → -, 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 → +, f(x) → \_\_\_\_\_\_\_\_\_\_, and    as x → -, 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 → +, f(x) → \_\_\_\_\_\_\_\_\_\_, and      as x → -, f(x) → \_\_\_\_\_\_\_\_\_\_ |