Math 3 **3.2 Graphing Exponentials and Logs** Unit 3

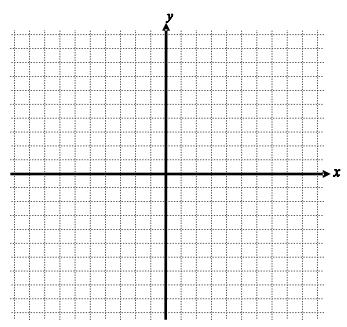
*EQ: How do you graph exponential and logarithmic functions as inverses on the coordinate plane?*

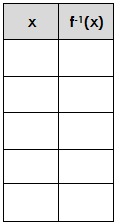
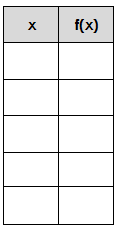
**Example 1:** Find the inverse of the following. Remember, swap x and y, and solve for y again!

1. y = log5x
2. y = log7x - 1
3. y = log3(x-2)
4. y = log4(x + 3) – 8

|  |  |  |  |
| --- | --- | --- | --- |
| **Exponential Function** | | **Logarithmic Function** | |
| A function whose unknown (x) is located in the exponent | | The inverse function of an exponential function. | |
| **Transformations:** y = a∙bx-h + k | | **Transformations:** y = a∙logb(x-h)+k | |
| **Asymptote:** |  | **Asymptote:** |  |

**Example 2:** Graphing Exponential Functions and their Inverses

1. 

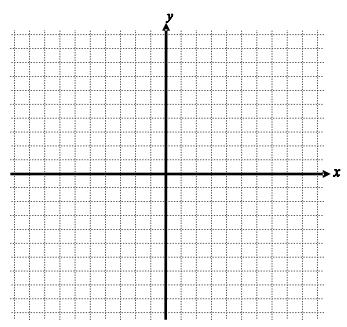


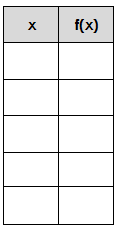
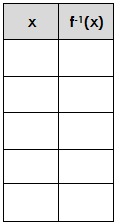
Transformations:

Asymptote:

Domain:

Range:

1. 

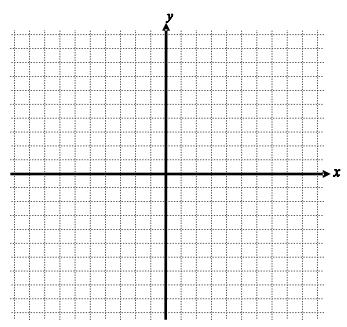


Transformations:

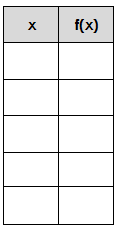
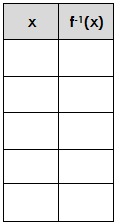
Asymptote:

Domain:

Range:





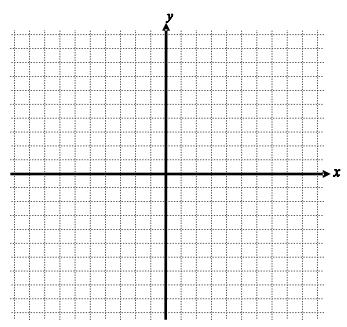


Transformations:

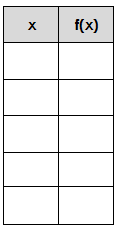
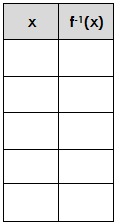
Asymptote:

Domain:

Range:







Transformations:

Asymptote:

Domain:

Range: