Section 7.2 Worksheet:

Assigned problems: Exercises pp. 356-358, 1-7, 17, 18, 28, 30, 43, 44

1. What is a one-to-one function, and how can you spot it at a glance?

2. How is the horizontal line test related to the vertical line test?

3. How is the graph of f^{-1} obtained from the graph of f?

4. How is the derivative of the inverse f^{-1} function related to that of the function f itself? Does this make sense graphically?

5. Example #4, page 354 gives us an example of what to do when we need an inverse function of a function which is non-invertible. This suggests how we might create an inverse function for important functions like $\sin(x)$ and $\cos(x)$. How so?

Notes:

1. There is a terrible risk of confusion when it comes to the notation for inverse functions. We denote the inverse of f as f^{-1}, but historically this means "f to the negative one power," and so students believe that f^{-1} means $\frac{1}{f}$: this is incorrect! Be careful to distinguish between these two cases.