

# Examples & Questions

Examples 1

Q: How does switching the values in the table help you determine the inverse relation? Q: How can the inverse of a relation that not a function be a function?

### Examples 2

Q: Why is the inverse of  $f(x) = x^2$  written with  $\pm$ ?

Q: How can you tell that the inverse of f is not a function from the graph? Q: If a point (x, y) is on the graph of the function, what do you know about the graph of the inverse?

### Examples 3

Q: Do you have to restrict the domain of every function to find an inverse function? Q: How could you restrict the domain of  $f(x) = x^2$  to produce a different inverse function?

### Examples 4

Part A:

Q: If the graph of a function can be intersected by a horizontal line in more than once place, what do you know about the inverse of the function?

Q: Does the domain of a square root function need to be restricted to have an inverse function?

Part B:

Q: Why does the domain of the function not need to be restricted?

# Examples 5

Q: Does the order of the function composition matter when verifying that tow functions are inverses of each other?

Q: How is the composition of a function and its inverse related to the graph of a function and its inverse?

Q: How are inverse functions similar to inverse operations?

# Examples 6

Q: How can you verify that you have rewritten the formula for *r* correctly? Q: How is the relationship between the original and rewritten formulas similar to the relationship between a function and its inverse?

#### Practice and Problem Solving

Complete MathXL for School: Practice and Problem Solving (online) Complete MathXL for School: Enrichment (online) Challenge: #11, 38 – key will be posted in Power School Learning.