

**Algebra II**  
**Auch**

**Section 7.2**  
**Date:**

**Objectives**

- Graph and recognize inverses of relations and functions
- Find inverses of functions

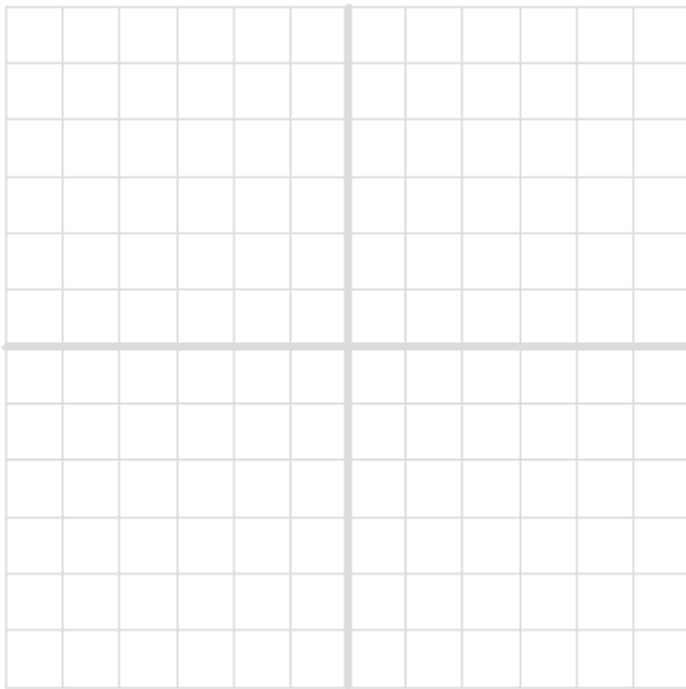
**Vocabulary**

- Inverse relation
- Inverse function

**Example 1**

Graph the relation and connect the points. Then graph the inverse. Identify the domain and range of each relation.

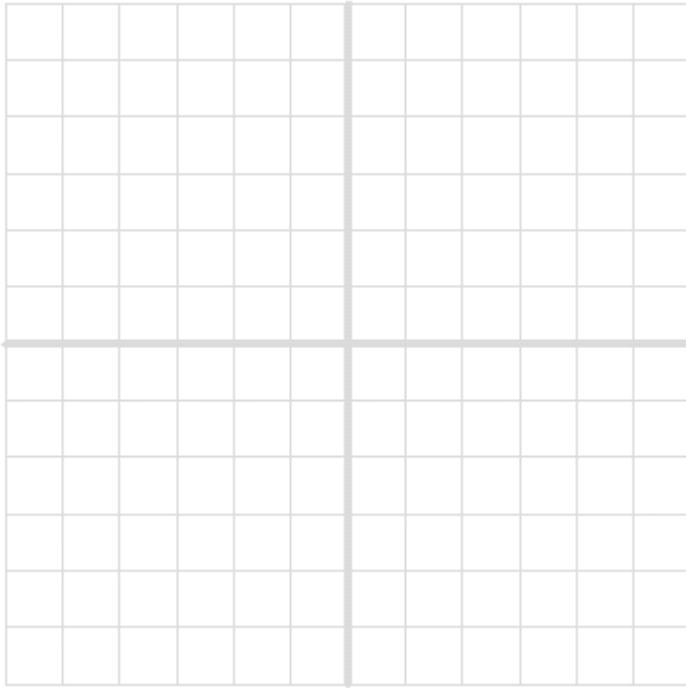
x	2	4	5	6	7
y	0	1	2	4	8



**Try it!**

Graph the relation and connect the points. Then graph the inverse. Identify the domain and range of each relation.

x	1	3	4	5	6
y	0	1	2	3	5



**Example 2**

**Writing Inverse functions by Using Inverse Operations**

$$f(x) = 2x$$

**Try it!**

**Writing Inverse functions by Using Inverse Operations**

$$f(x) = \frac{x}{3}$$

$$f(x) = x + \frac{2}{3}$$

**Example 3**

**Writing Inverses of Multi-Step Functions**

$$f(x) = \frac{x}{4} - 5$$

*Try it!*

**Writing Inverse functions by Using Inverse Operations**

$$f(x) = 5x - 7$$

**Example 4**

**Writing and Graphing Inverse Functions**

**Graph  $f(x) = 3x + 6$ , then write the inverse and graph.**



***Try it!***

**Graph  $f(x) = \frac{2}{3}x + 2$ , then write the inverse and graph.**



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