## 3-1 Additional Practice

Relations and Functions

What is the domain and range of each function?
1.

| $x$ | 3 | 5 | 7 | 8 | 11 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $y$ | 6 | 7 | 7 | 9 | 14 |

2. 

| $x$ | -3 | -1 | 2 | 5 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $y$ | 9 | 5 | 4 | -5 | -7 |

Is each relation a function? If so, state whether it is one-to-one or many-to-one.
3. $\{(-4,7),(-3,5),(1,4),(3,-8),(5,-11)\}$
4. $\{(-4,8),(-2,4),(0,1),(2,4),(4,8)\}$
5.

6.

7. Explain how the vertical line test proves that a relation is not a function.
8. Fiona buys different amounts of gas at $\$ 2.25$. She has a graph which shows the different amounts she should pay. What constraints are there on the domain of the function?

