Understanding Relations and Functions

Practice and Problem Solving: C

Graph each relation. Then explain whether it is a function or not.

1. \{ (1, 2), (2, 2), (3, 3), (4, 3) \}
2. \{ (1, 5), (2, 4), (3, 5), (3, 4), (4, 4), (5, 5) \}

Solve.

3. Locate 5 points on the first graph so that it shows a function. Then change one number in one of the ordered pairs. Locate the new set of points on the second graph to show a relation that is not a function. Explain your strategy.

4. Identify whether the graph shows a function or a relation that is not a function. Explain your reasoning.

5. The function \( \text{INT}(x) \) is used in spreadsheet programs. \( \text{INT}(x) \) takes any \( x \) and rounds it down to the nearest integer. Find \( \text{INT}(x) \) for \( x = 4.6, -2.3, \text{ and } \sqrt{2} \). Then find the domain and range.