Identify the domain and range of each relation. Use a mapping diagram to determine whether the relation is a function.

1. \{(3, 6), (5, 7), (7, 7) (8, 9)\}

2. \{(0, 0.4), (1, 0.8), (2, 1.2), (3, 1.6)\}

3. \{(5, –4), (3, –5), (4, –3), (6, 4)\}

4. \{(0.3, 0.6), (0.4, 0.8), (0.3, 0.7), (0.5, 0.5)\}

Use the vertical line test to determine whether the relation is a function.

5. 

6. 

7. **Writing** Explain when a relation is not a function.

9. Explain how the vertical line test can be used to determine if a relation is a function.
Plot each of the following functions, determine if the relation is a function and then state the domain and range.

10. \{ (3, 6), (5, 7), (7, 7), (8, 9) \}

Function? ______________________

Domain: ______________________

Range: _______________________

11. \{ (0, 0.4), (1, 0.8), (2, 1.2), (3, 1.6) \}

Function? ______________________

Domain: ______________________

Range: _______________________

12. \{ (5, -4), (3, -5), (4, -3), (6, 4) \}

Function? ______________________

Domain: ______________________

Range: _______________________

13. \{ (0.3, 0.6), (0.4, 0.8), (0.3, 0.7), (0.5, 0.5) \}

Function? ______________________

Domain: ______________________

Range: _______________________

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Domain and Range Worksheet #1

Name: ____________________

State the domain and range for each graph and then tell if the graph is a function (write yes or no). If the graph is a function, state whether it is discrete, continuous or neither.

1) Discrete or Cont? ______
   Domain ________________
   Range ________________
   Function? ________________

2) Discrete or Cont? ______
   Domain ________________
   Range ________________
   Function? ________________

3) Discrete or Cont? ______
   Domain ________________
   Range ________________
   Function? ________________

4) Discrete or Cont? ______
   Domain ________________
   Range ________________
   Function? ________________

5) Discrete or Cont? ______
   Domain ________________
   Range ________________
   Function? ________________

6) Discrete or Cont? ______
   Domain ________________
   Range ________________
   Function? ________________
7) Discrete or Cont? ______
   Domain________________
   Range________________
   Function?______________

8) Discrete or Cont? ______
   Domain________________
   Range________________
   Function?______________

9) Discrete or Cont? ______
   Domain________________
   Range________________
   Function?______________

10) Discrete or Cont? ______
    Domain________________
    Range________________
    Function?______________

11) Discrete or Cont? ______
    Domain________________
    Range________________
    Function?______________

12) Discrete or Cont? ______
    Domain________________
    Range________________
    Function?______________
Draw a graph with the following domain and range. Identify whether the relation is a function and whether it is continuous or discrete (circle one).

12) Domain: {-2, 0, 4}  
   Range: {-3, -1, 2, 3, 4}  
   Function?  
   Continuous or Discrete?  

13) Domain: 0 ≤ x ≤ 7  
   Range: -4 ≤ y ≤ 6  
   Function?  
   Continuous or Discrete?  

14) Domain: -8 ≤ x ≤ 3  
   Range: -1 ≤ y ≤ 5  
   Function?  
   Continuous or Discrete?  

15) Domain: all real numbers  
   Range: all real numbers  
   Function?  
   Continuous or Discrete?  

16) Domain: {1}  
   Range: {-1, 3, 6}  
   Function?  
   Continuous or Discrete?  

17) Domain: {-9, -6, -5, 0, 3, 4}  
   Range: {-2}  
   Function?  
   Continuous or Discrete?  

18) Domain: -5 ≤ x ≤ 7  
   Range: 0 ≤ y ≤ 3  
   Function?  
   Continuous or Discrete?  

19) Domain: all real numbers  
   Range: 0 ≤ y ≤ ∞  
   Function?  
   Continuous or Discrete?  

20) Domain: -∞ ≤ x ≤ 4  
   Range: all real numbers  
   Function?  
   Continuous or Discrete?