

Name: _____

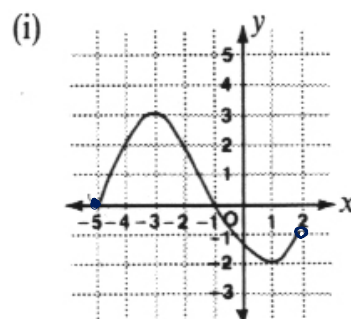
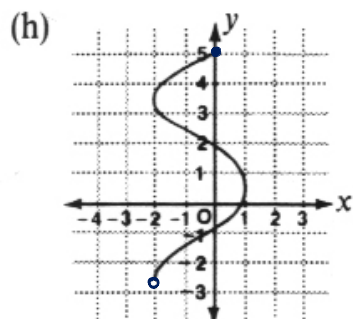
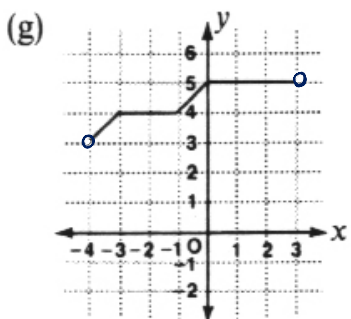
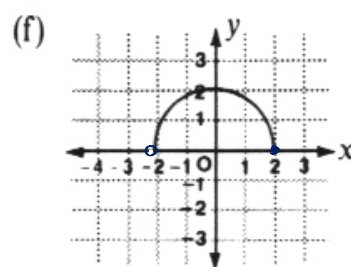
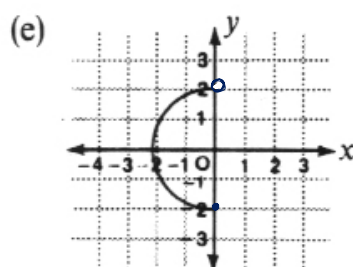
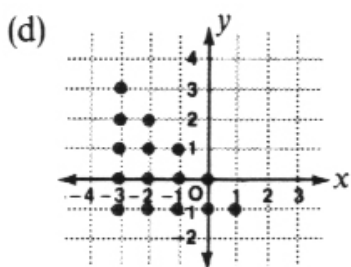
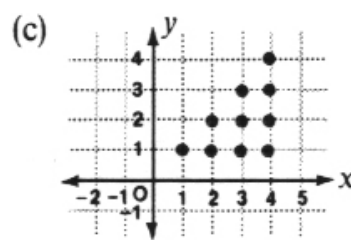
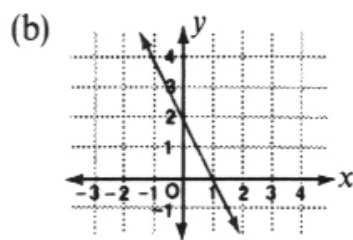
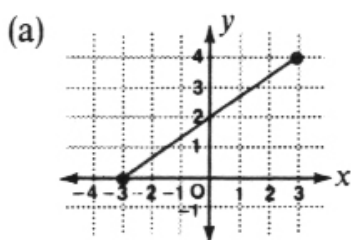
Practice Vertical Line Test + Domain & Range

1.

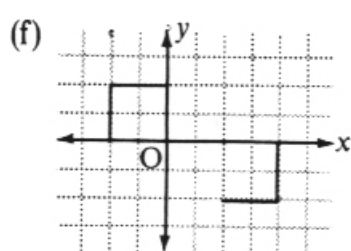
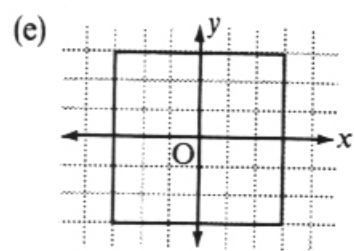
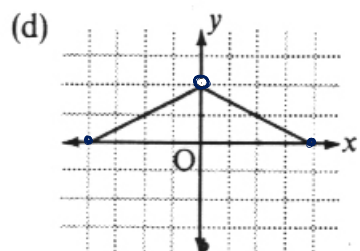
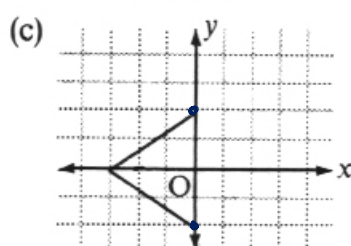
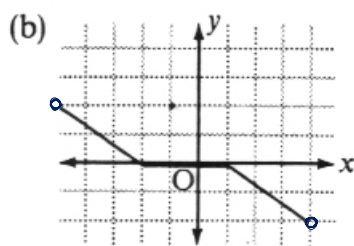
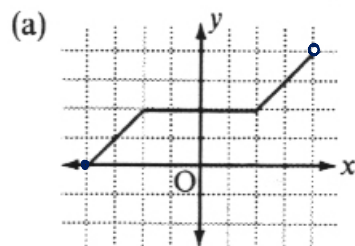
For the following:

A: use the vertical line test to determine which represent a function;
which do not.

B: write the domain and range.



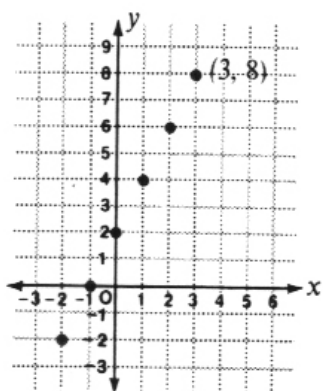
2. Which of the following are functions? State domain and range for each.



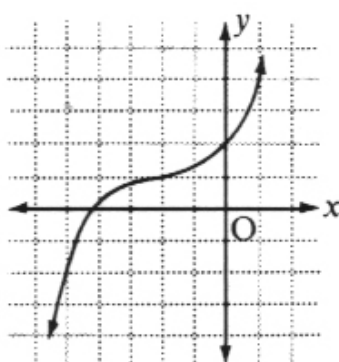
Name: _____

Find the Domain and Range for each of the following functions

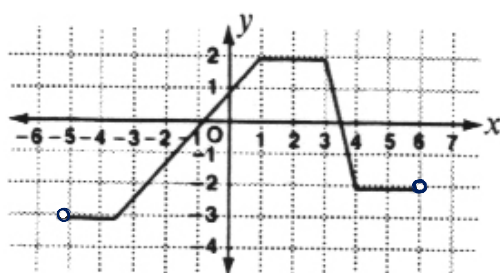
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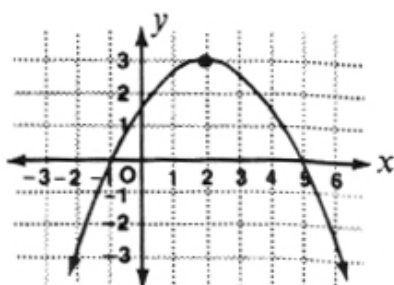
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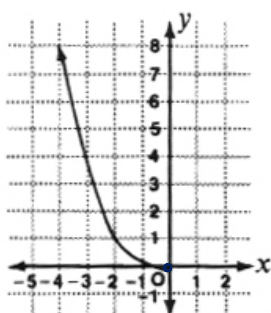
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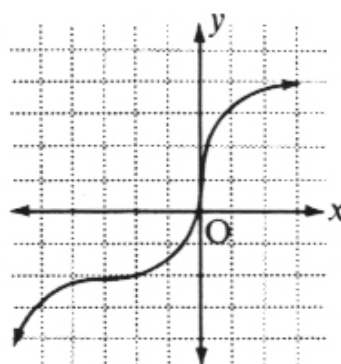
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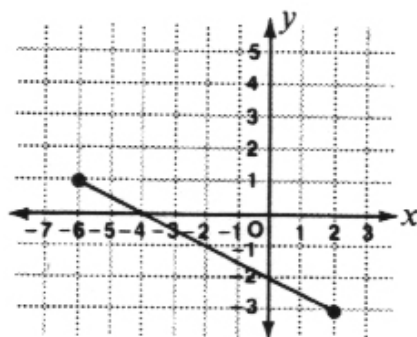
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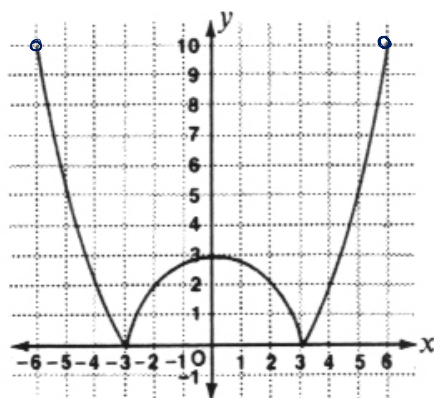
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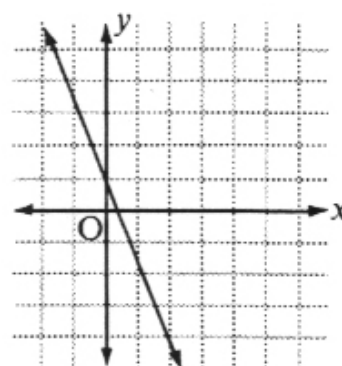
9.



10.

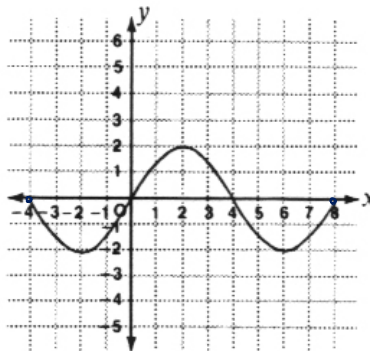


11.

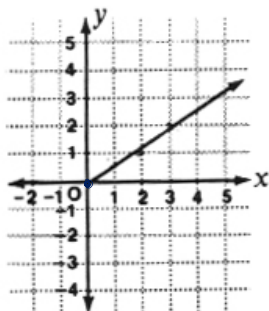


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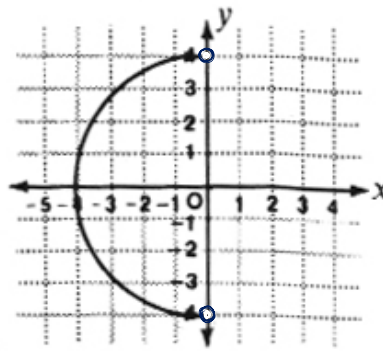
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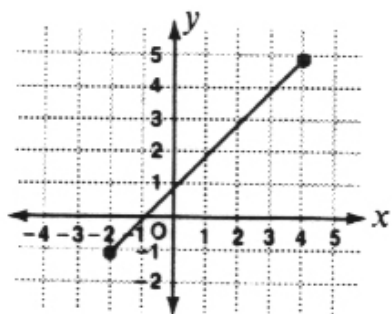
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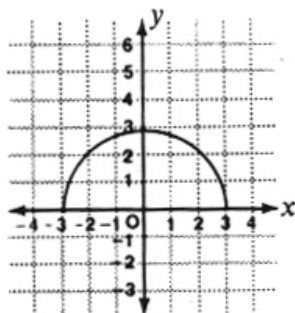
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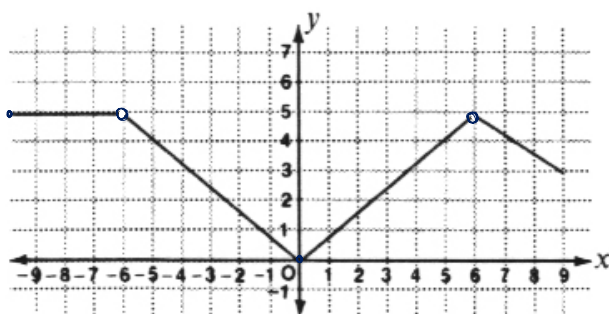
15.



16.

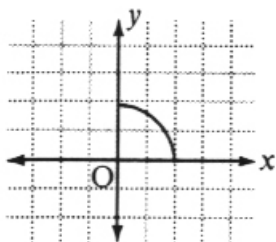


17.

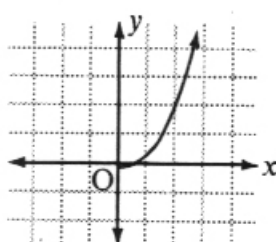


18. Find the domain and range for these as well.

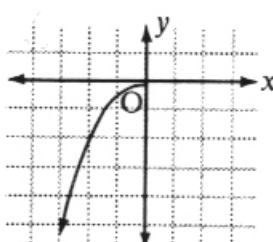
(a)



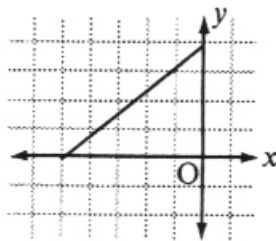
(b)



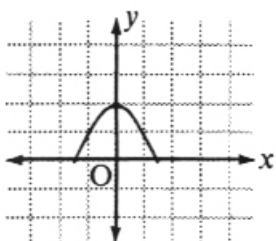
(c)



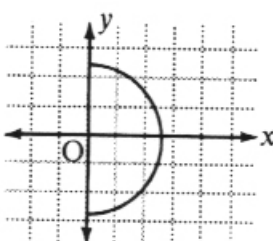
(d)



(e)



(f)



Name: _____

ANSWERS

1. a. function
 $D = \{x \mid -3 \leq x \leq 3, x \in \mathbb{R}\}$
 $R = \{y \mid 0 \leq y \leq 4, y \in \mathbb{R}\}$

1. b. function
 $D = \{x \mid x \in \mathbb{R}\}$
 $R = \{y \mid y \in \mathbb{R}\}$

1. c. NOT a function
 $D = \{x \mid 1 \leq x \leq 4, x \in \mathbb{I}\}$
 or $x = 1, 2, 3, 4$
 $R = \{y \mid y = 1, 2, 3, 4\}$

1. d. NOT a function
 $D = \{x \mid x = -3, -2, -1, 0, 1\}$
 $R = \{y \mid y = -1, 0, 1, 2, 3\}$

1. e. NOT a function
 $D = \{x \mid -2 \leq x \leq 0, x \in \mathbb{R}\}$
 $R = \{y \mid -2 \leq y < 2, y \in \mathbb{R}\}$

1. f. function
 $D = \{x \mid -2 < x \leq 2, x \in \mathbb{R}\}$
 $R = \{y \mid 0 \leq y \leq 2, y \in \mathbb{R}\}$

1. g. function
 $D = \{x \mid -4 < x < 3, x \in \mathbb{R}\}$
 $R = \{y \mid 3 < y < 5, y \in \mathbb{R}\}$

1. h. NOT a function
 $D = \{x \mid -2 \leq x \leq 1, x \in \mathbb{R}\}$
 $R = \{y \mid -3 < y \leq 5, y \in \mathbb{R}\}$

1. i. function
 $D = \{x \mid -5 \leq x < 2, x \in \mathbb{R}\}$
 $R = \{y \mid -2 \leq y \leq 3, y \in \mathbb{R}\}$

2. a. function
 $D = \{x \mid -4 \leq x < 4, x \in \mathbb{R}\}$
 $R = \{y \mid 0 \leq y < 4, y \in \mathbb{R}\}$

2. b. function
 $D = \{x \mid -5 < x < 4, x \in \mathbb{R}\}$
 $R = \{y \mid -2 < y < 2, y \in \mathbb{R}\}$

2. c. NOT a function
 $D = \{x \mid -3 \leq x \leq 0, x \in \mathbb{R}\}$
 $R = \{y \mid -2 \leq y \leq 2, y \in \mathbb{R}\}$

2. d. function
 $D = \{x \mid -4 \leq x \leq 4, x \neq 0, x \in \mathbb{R}\}$
 $R = \{y \mid 0 \leq y < 2, y \in \mathbb{R}\}$

2. e. NOT a function
 $D = \{x \mid -3 \leq x \leq 3, x \in \mathbb{R}\}$
 $R = \{y \mid -3 \leq y \leq 3, y \in \mathbb{R}\}$

2. f. NOT a function
 $D = \{x \mid -2 \leq x \leq 0, 2 \leq x \leq 4, x \in \mathbb{R}\}$
 $R = \{y \mid -2 \leq y \leq 2, y \in \mathbb{R}\}$

3. $D = \{x \mid x = -2, -1, 0, 1, 2, 3\}$
 $R = \{y \mid y = -2, 0, 2, 4, 6, 8\}$

4. $D = \{x \mid x \in \mathbb{R}\}$
 $R = \{y \mid y \in \mathbb{R}\}$

5. $D = \{x \mid -5 < x < 6, x \in \mathbb{R}\}$
 $R = \{y \mid -3 \leq y \leq 2, y \in \mathbb{R}\}$

6. $D = \{x \mid x \in \mathbb{R}\}$
 $R = \{y \mid y \leq 3, y \in \mathbb{R}\}$

7. $D = \{x \mid x \leq 0, x \in \mathbb{R}\}$
 $R = \{y \mid 0 \leq y, y \in \mathbb{R}\}$

8. $D = \{x \mid x \in \mathbb{R}\}$
 $R = \{y \mid y \in \mathbb{R}\}$

9. $D = \{x \mid -6 \leq x \leq 2, x \in \mathbb{R}\}$
 $R = \{y \mid -3 \leq y \leq 1, y \in \mathbb{R}\}$

10. $D = \{x \mid -6 < x < 6, x \in \mathbb{R}\}$
 $R = \{y \mid 0 \leq y < 10, y \in \mathbb{R}\}$

11. $D = \{x \mid x \in \mathbb{R}\}$
 $R = \{y \mid y \in \mathbb{R}\}$

12. $D = \{x \mid -4 \leq x \leq 8, x \in \mathbb{R}\}$
 $R = \{y \mid -2 \leq y \leq 2, y \in \mathbb{R}\}$

13. $D = \{x \mid 0 \leq x, x \in \mathbb{R}\}$
 $R = \{y \mid 0 \leq y, y \in \mathbb{R}\}$

14. $D = \{x \mid -4 \leq x < 0, x \in \mathbb{R}\}$
 $R = \{y \mid -4 < y < 4, y \in \mathbb{R}\}$

15. $D = \{x \mid -2 \leq x \leq 4, x \in \mathbb{R}\}$
 $R = \{y \mid -1 \leq y \leq 5, y \in \mathbb{R}\}$

16. $D = \{x \mid -3 \leq x \leq 3, x \in \mathbb{R}\}$
 $R = \{y \mid 0 \leq y \leq 3, y \in \mathbb{R}\}$

17. $D = \{x \mid -10 \leq x < 6, -6 < x \leq 9, 6 \neq x, x \in \mathbb{R}\}$
 or $-10 \leq x \leq 9, x \neq -6, 6, x \in \mathbb{R}$
 $R = \{y \mid 0 \leq y \leq 5, y \in \mathbb{R}\}$

18. a. $D = \{x \mid 0 \leq x \leq 2, x \in \mathbb{R}\}$
 $R = \{y \mid 0 \leq y \leq 2, y \in \mathbb{R}\}$

18. b. $D = \{x \mid 0 \leq x, x \in \mathbb{R}\}$
 $R = \{y \mid 0 \leq y, y \in \mathbb{R}\}$

18. c. $D = \{x \mid x \leq 0, x \in \mathbb{R}\}$
 $R = \{y \mid y \leq 0, y \in \mathbb{R}\}$

18. d. $D = \{x \mid -5 \leq x \leq 0, x \in \mathbb{R}\}$
 $R = \{y \mid 0 \leq y \leq 4, y \in \mathbb{R}\}$

18. e. $D = \{x \mid -1.5 \leq x \leq 1.5, x \in \mathbb{R}\}$
 $R = \{y \mid 0 \leq y \leq 2, y \in \mathbb{R}\}$

18. f. $D = \{x \mid 0 \leq x \leq 2.5, x \in \mathbb{R}\}$
 $R = \{y \mid -2.5 \leq y \leq 2.5, y \in \mathbb{R}\}$