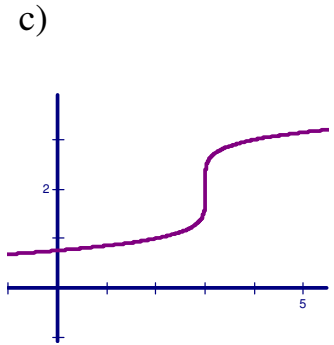
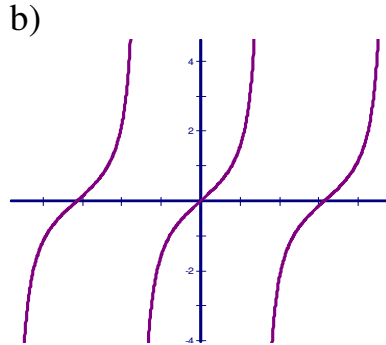
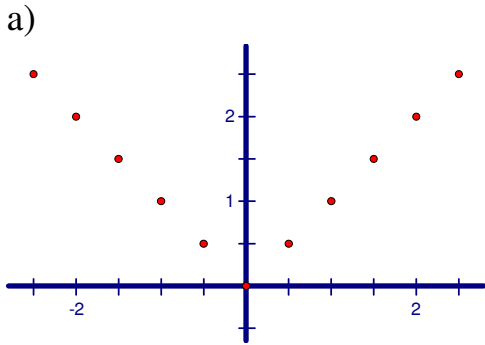


## Chapter 7 Review

### Section 7.2

1. State whether each of the following represents a function:



d)

Domain	-5	-3	-1	0	1	4	9
Range	-8	-6	-2	0	2	5	8

e)  $(11, -3), (6, -2), (1, -1), (0, 0), (1, 1), (6, 2), (11, 3)$

### Section 7.3

2. Identify the independent variable and the dependent variable in the following:

*The heavier a car the lower its gas mileage.*

Independent:

Dependent:

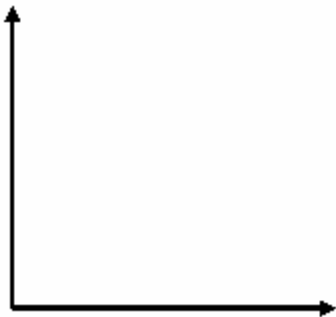
*The amount of mold on food and how long it has been in the refrigerator.*

Independent:

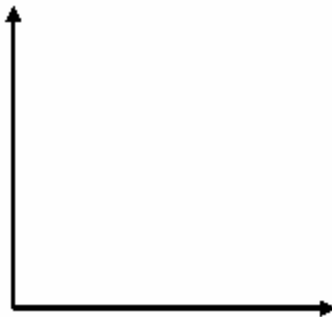
Dependent:

3. Sketch a graph of a function with the following properties:

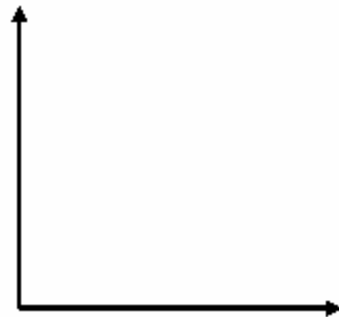
a) a continuous function that increases first and then decreases



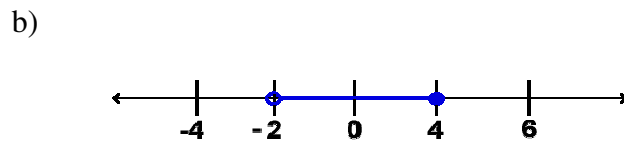
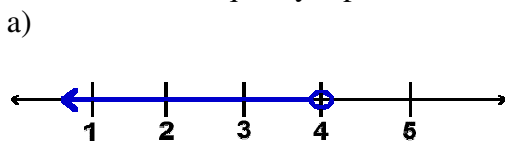
b) a discrete function with a constant rate of change equal to zero



c) a continuous, nonlinear function that increases faster and faster

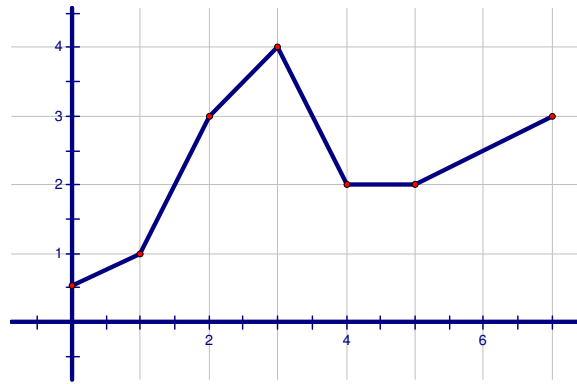


4. Write the inequality represented on each number line:



## Section 7.4

5. Use the graph of the relation below to answer each of the following:



- What is the value of  $f(3)$ ?
- For what  $x$ -value(s) does  $f(x) = 3$ ?
- Find  $f(3 \cdot 2 - 5)$ .
- Find  $f(2) + f(4) - 1$ .
- What is the domain?
- What is the range?
- Is this relation a function?
- For which  $x$ -values is the relation decreasing?

6. Find each of the following values for the functions  $f(x) = -8x + 1$ ,  $g(x) = |x| - 0.5$  and  $h(x) = 3 + x^2$ .

- $f(2)$
- $g(-1)$
- $h(3)$
- $x$ , when  $f(x) = 5$
- $x$ , when  $g(x) = 7$
- $x$ , when  $h(x) = 52$

## Section 7.5 and 7.6

7. Evaluate each expression:

- $|-8.32|$
- $|4 - 7|$
- $10^2$
- $(-6)^2$
- $|-5| + |3|$
- $2|1 - (-6)|$
- $(-8)^2 - 2^2$
- $.5(13 - 7)^2$

8. Solve each equation or inequality for  $x$ :

- $|x| = 32$
- $3|x| + 2 = 17$
- $|x - 1| - 7 = 8$
- $|x| - 4 < 5$
- $x^2 = 121$
- $-4x^2 + 5 = -95$
- $(x + 2)^2 = 36$
- $x^2 + 9 > 25$

## Chap 7 Review- Answers

1. a) yes b) yes c) no d)yes e) no
2. Independent: weight of car, Dependent: gas mileage; Independent: time, Dependent: amount of mold
3. possible graphs:  
a) b) c)
4. a)  $x < 4$  b)  $-2 < x \leq 4$
5. a) 4 b) 2, 3.5, 7 c) 1 d) 4 e)  $0 \leq x \leq 7$  f)  $0.5 \leq y \leq 4$  g) yes h)  $3 < x < 4$
6. a)  $f(2) = -15$  b)  $g(-1) = .5$  c)  $h(3) = 12$  d)  $x = -\frac{1}{2}$  e)  $x = 7.5$  or  $x = -7.5$  f)  $x = 7$  or  $x = -7$
7. a) 8.32 b) 3 c) 100 d) 36 e) 8 f) 14 g) 60 h) 18
8. a)  $x = 32$  or  $x = -32$  b)  $x = 5$  or  $x = -5$  c)  $x = 16$  or  $x = -14$  d)  $-9 < x < 9$  e)  $x = 11$  or  $x = -11$   
f)  $x = 5$  or  $x = -5$  g)  $x = 4$  or  $x = -8$  h)  $x > 4$  or  $x < -4$

## Chap 7 Review- Answers

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## Chap 7 Review- Answers

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