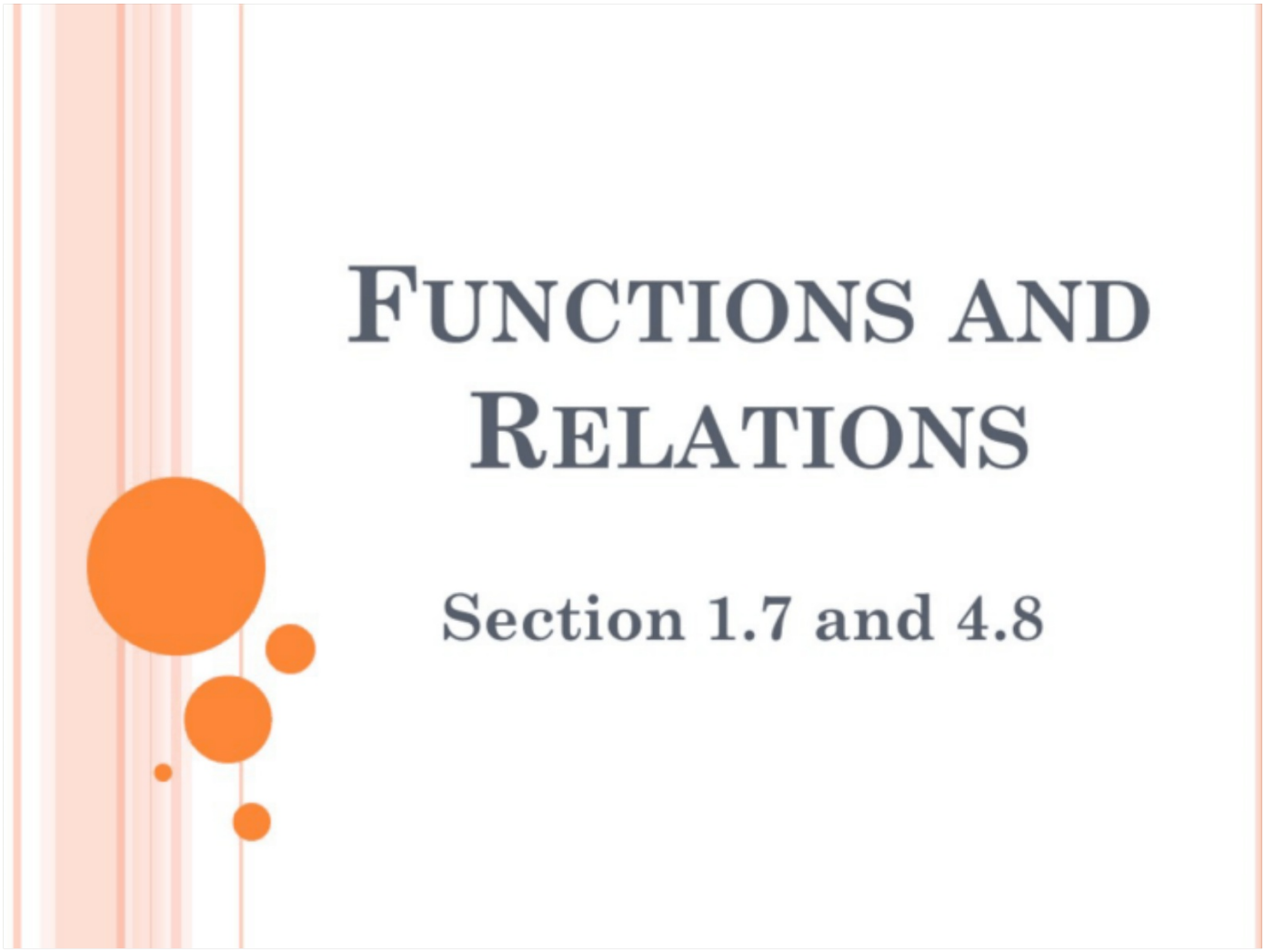

FUNCTIONS AND RELATIONS
Section 1.7 and 4.8

Relations and Functions

- **Relation**: A set of ordered pairs
  - Example {(5,2), (3,8) (-7,3), (5,4), (-4,8), (10, 6)}
- **Function**: A relation that has only one output for each input
  - Example {(2,3), (3,2), (4,2), (5,21), (-2,7)}

D: {5, 3, -7, -4,
R: {2, 8, 3, 4, 6}

Functions

Independent
Input
Domain
X

Dependent
Output
Range
Y

A Function Must Have Only One Output for each Input

(4,7)(5,5)(6,6)(7,4)

Input	Output
4	7
5	5
6	6
7	4

Function

Input	Output
4	7
5	7
6	6
7	6

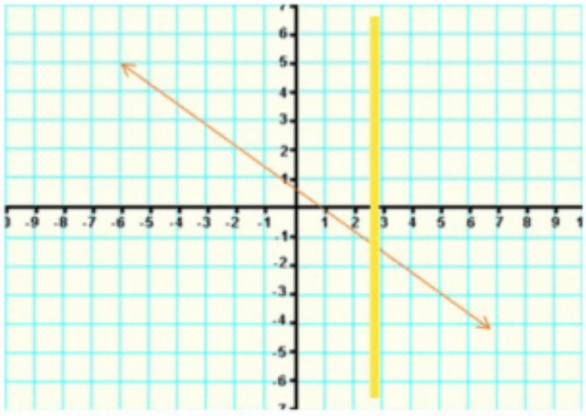
Function

Input	Output
4	7
4	5
6	6
7	4

Not a Function

Vertical Line Test For Functions

- A relation is a function if and only if no vertical line intersects the graph of the relation at more than one point



Function

Not a Function

Classwork

- Pg 49 # 4-6, 10-12

Homework

- Pg 259 # 7-9, 11-19