

Section 5.5 P. 294: 6, 7, 9, 10, 11, 16, 17

Challenge: 21, 23, 24

6) (a) represents a function because each  $x$ -value (domain) is associated with exactly one  $y$ -value (always 1)

(b) does not because there are an infinite number of  $y$ -values that the  $x$ -value 1 is associated with

- 7) a)  $\rightarrow$  iv  
 b)  $\rightarrow$  i  
 c)  $\rightarrow$  ii  
 d)  $\rightarrow$  iii

9) a) Set  
Domain  
 $\{x \mid x \in \mathbb{R}\}$   
Range  
 $\{y \mid y \geq 1, y \in \mathbb{R}\}$

Interval  
Domain  
 $(-\infty, \infty)$   
Range  
 $[1, \infty)$

<p>9) b) <u>Set</u>  <u>Domain</u>  <math>\{x \mid -3 \leq x \leq 3, x \in \mathbb{R}\}</math>  <u>Range</u>  <math>\{y \mid 0 \leq y \leq 3, y \in \mathbb{R}\}</math></p>	<p><u>Interval</u>  <u>Domain</u>  <math>[-3, 3]</math>  <u>Range</u>  <math>[0, 3]</math></p>
<p>9) c) <u>Domain</u>  <math>\{x \mid -3 \leq x \leq 3, x \in \mathbb{R}\}</math>  <u>Range</u>  <math>\{y \mid -3 \leq y \leq 0, y \in \mathbb{R}\}</math></p>	<p><u>Domain</u>  <math>[-3, 3]</math>  <u>Range</u>  <math>[-3, 0]</math></p>
<p>d) <u>Domain</u>  <math>\{x \mid -1 \leq x \leq 2, x \in \mathbb{R}\}</math>  <u>Range</u>  <math>\{y \mid 0 \leq y \leq 3, y \in \mathbb{R}\}</math></p>	<p><u>Domain</u>  <math>[-1, 2]</math>  <u>Range</u>  <math>[0, 3]</math></p>

Please refer to the text book for all other answers.