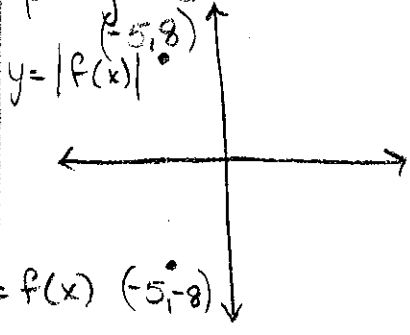


# 7.2 Pre-Calculus Math II

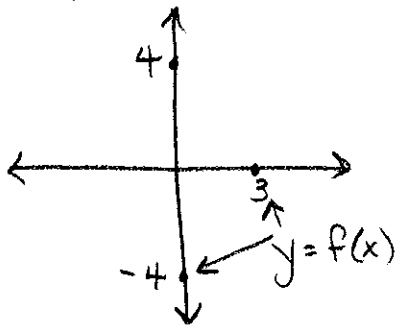
page 375 #2-4 (sketch), 5b, 6be, 7b, 8ae, 12, 13

2.



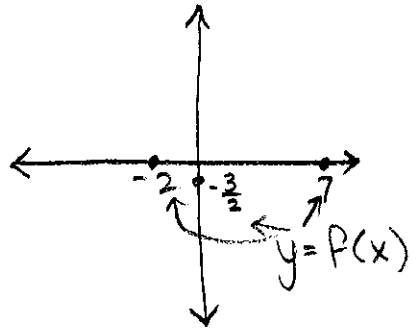
The y-value must be positive so the point is reflected across the x-axis.

3.



For  $y = |f(x)|$   
 - the x-intercept will not change so it is still 3  
 - the y-intercept will reflect across the x-axis so it will be 4

4.

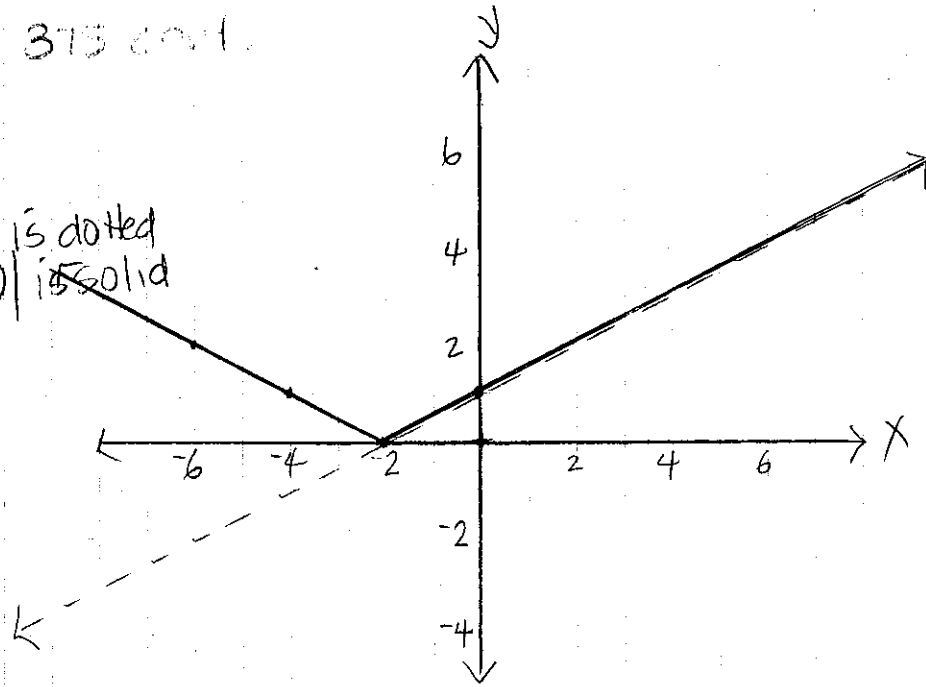


For  $y = |f(x)|$   
 - the x-intercepts will not change so they are -2 and 7  
 - the y-intercept will reflect across the x-axis so it will be  $\frac{3}{2}$  or 1.5

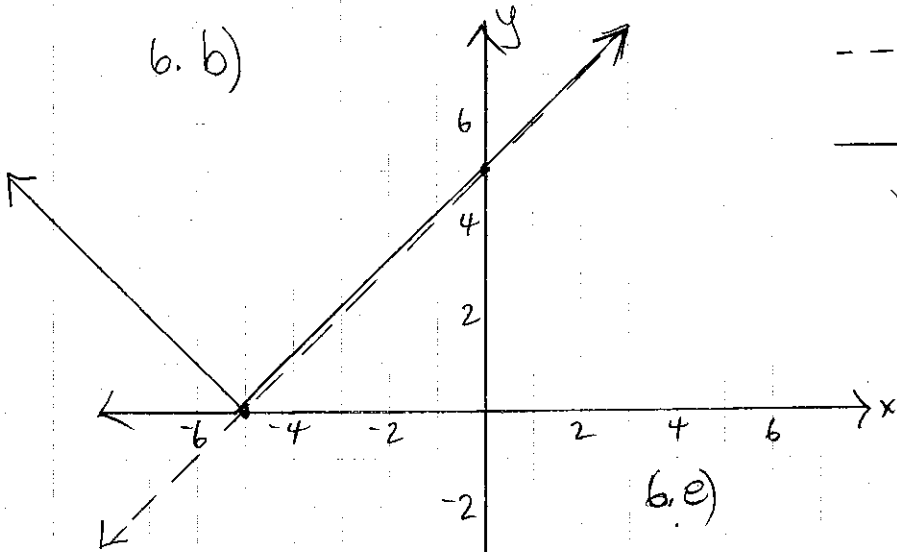
page 375 cont.

5. b)

$y = f(x)$  is dotted  
 $y = |f(x)|$  is solid



b. b)



---  $y = x + 5$

—  $y = |x + 5|$

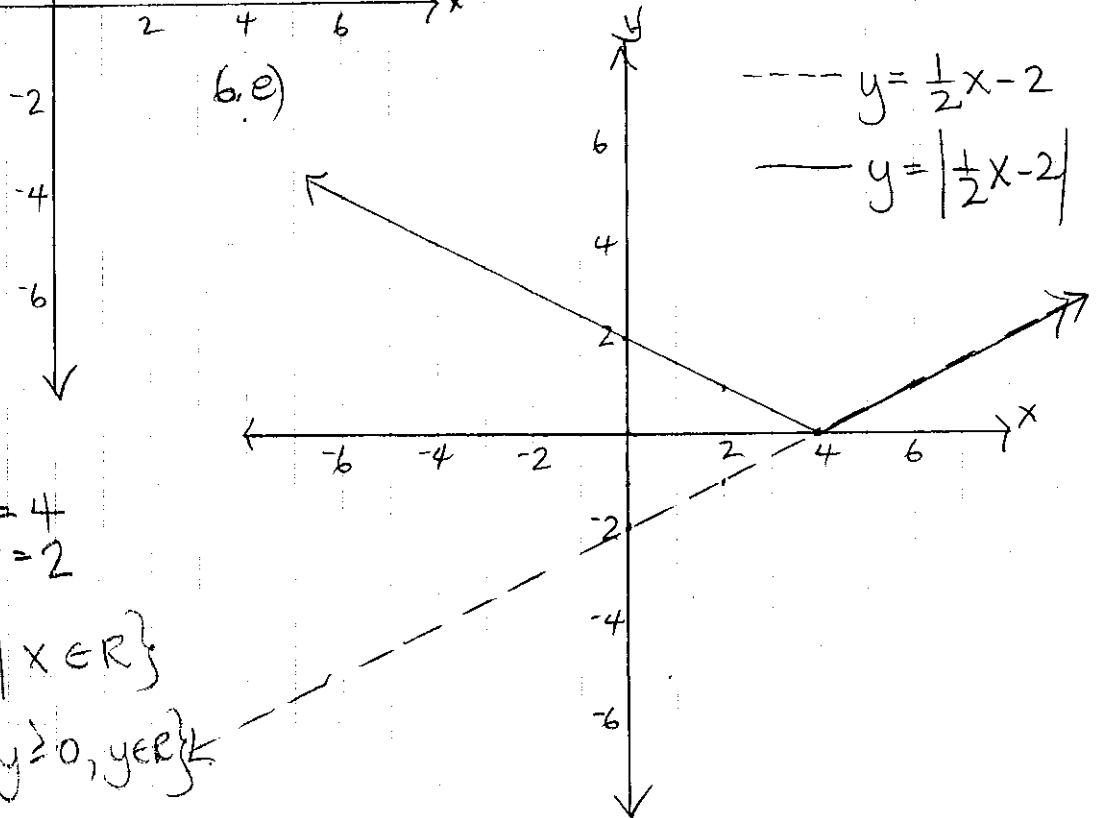
x-intercept = -5

y-intercept = 5

domain  $\{x \mid x \in \mathbb{R}\}$

range  $\{y \mid y \geq 0, y \in \mathbb{R}\}$

b. e)



---  $y = \frac{1}{2}x - 2$

—  $y = |\frac{1}{2}x - 2|$

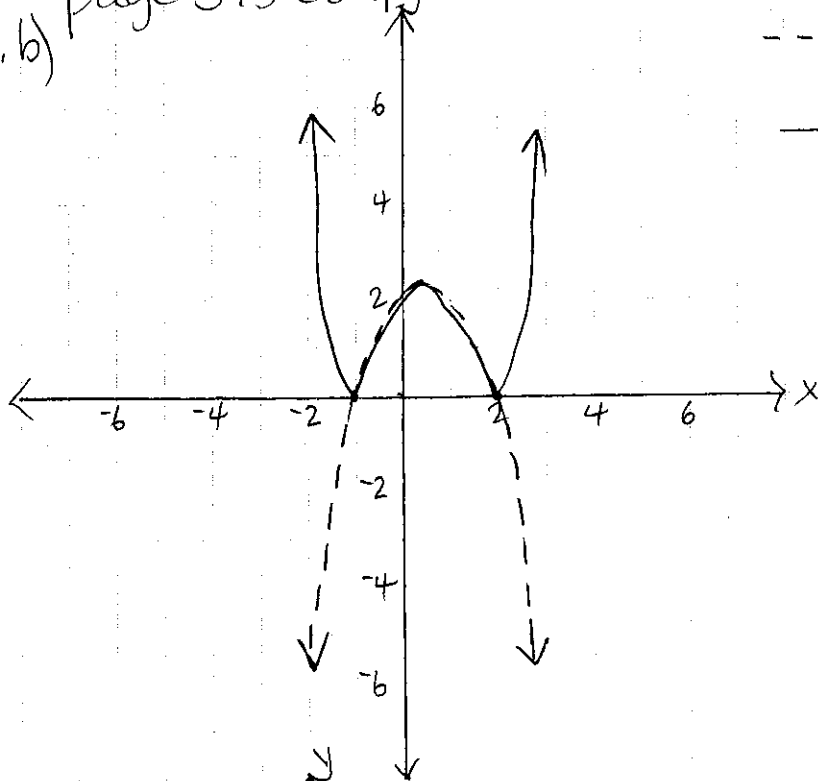
x-intercept = 4

y-intercept = -2

domain  $\{x \mid x \in \mathbb{R}\}$

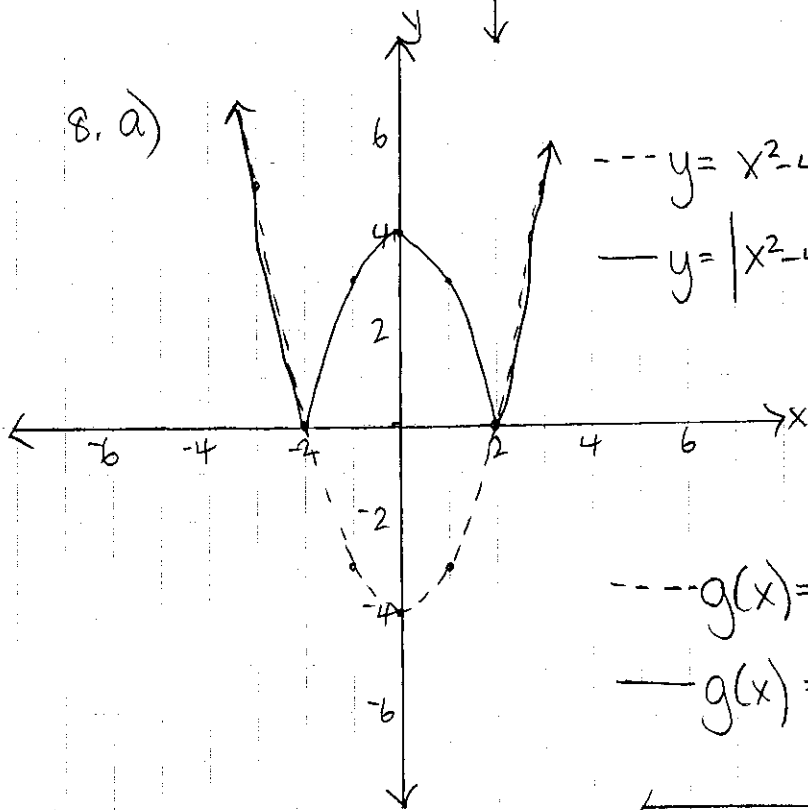
range  $\{y \mid y \geq 0, y \in \mathbb{R}\}$

7. b) page 375 conty



---  $y = f(x)$   
 —  $y = |f(x)|$

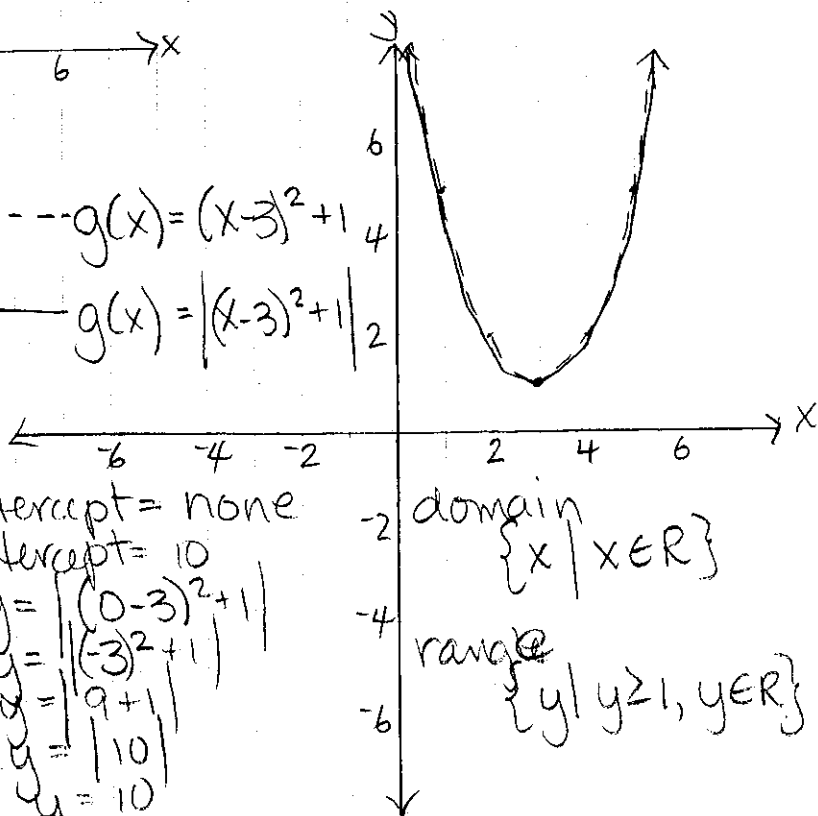
8. a)



---  $y = x^2 - 4$   
 —  $y = |x^2 - 4|$

x-intercept = -2 and 2  
 y-intercept = 4  
 domain  $\{x | x \in \mathbb{R}\}$   
 range  $\{y | y \geq 0, y \in \mathbb{R}\}$

---  $g(x) = (x-3)^2 + 1$   
 —  $g(x) = |(x-3)^2 + 1|$



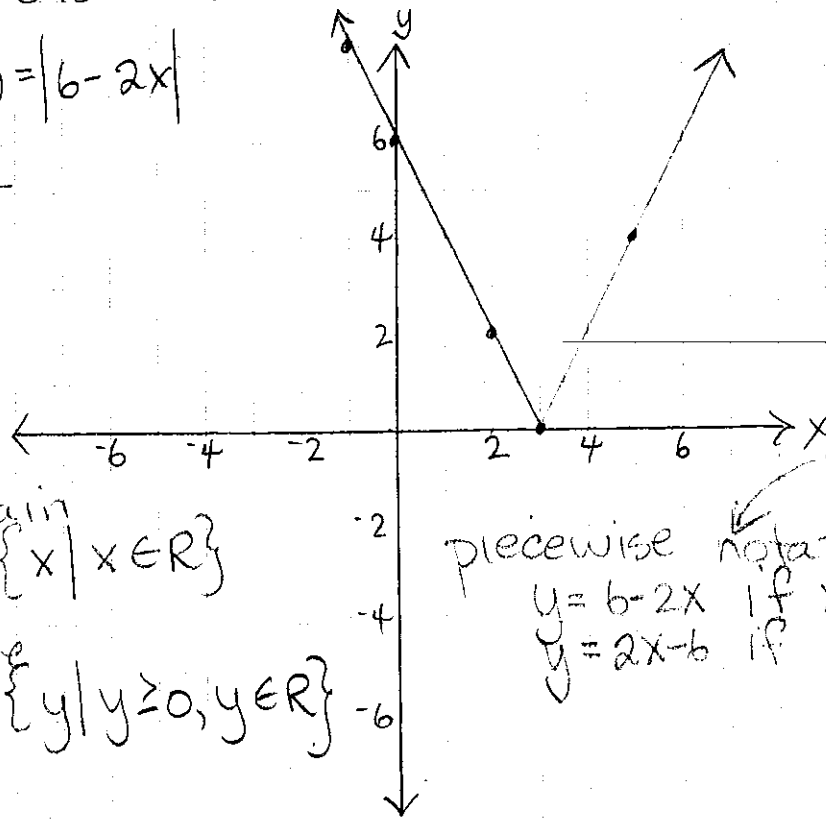
x-intercept = none  
 y-intercept = 10  
 $y = |(0-3)^2 + 1|$   
 $y = |(-3)^2 + 1|$   
 $y = |9 + 1|$   
 $y = |10|$   
 $y = 10$

domain  $\{x | x \in \mathbb{R}\}$   
 range  $\{y | y \geq 1, y \in \mathbb{R}\}$

Page 375 cont.

12.  $g(x) = |6 - 2x|$

x	y
-1	8
0	6
2	2
3	0
5	4



Write the equation for each line making the V

domain  $\{x | x \in \mathbb{R}\}$

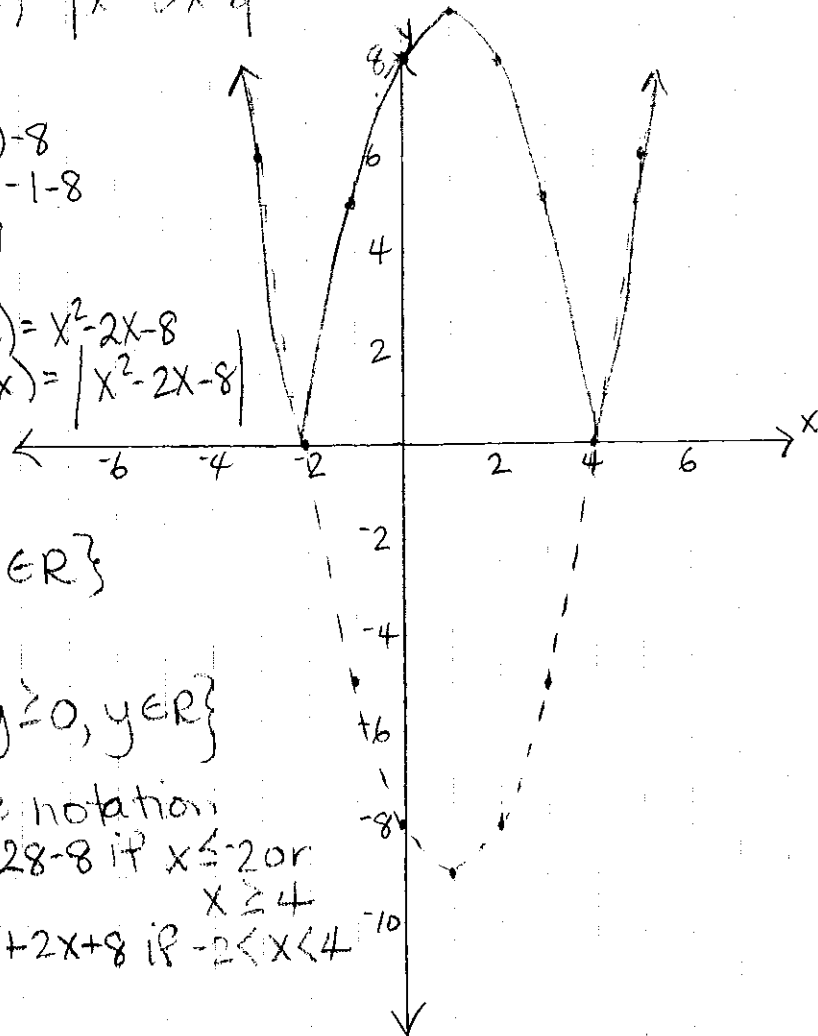
range  $\{y | y \geq 0, y \in \mathbb{R}\}$

piecewise notation  
 $y = 6 - 2x$  if  $x \leq 3$   
 $y = 2x - 6$  if  $x > 3$

13.  $g(x) = |x^2 - 2x - 8|$

$y = x^2 - 2x - 8$   
 $y = (x^2 - 2x + 1 - 1) - 8$   
 $y = (x^2 - 2x + 1) - 1 - 8$   
 $y = (x - 1)^2 - 9$

---  $g(x) = x^2 - 2x - 8$   
 —  $g(x) = |x^2 - 2x - 8|$



domain  $\{x | x \in \mathbb{R}\}$

range  $\{y | y \geq 0, y \in \mathbb{R}\}$

piecewise notation  
 $y = x^2 - 2x - 8$  if  $x \leq -2$  or  $x \geq 4$   
 $y = -x^2 + 2x + 8$  if  $-2 < x < 4$