

OCC College Credit:
 Pre-Req: Passed Alg2CC & Regents
 Must register before Friday Sept. 13th
 Link to instructions on my website
 Why you should register... or not

Why you should consider

- o No cost
- o 4 credits at OCC
- o May transfer to your non-OCC college

Why you might not (you have this choice)

- o Struggling student won't want a poor grade to average into OCC average if attending there.
- o Cannot drop out of OCC course after the Sept 15th without showing a failure on OCC transcript. This affects FASFA financial aid application in a bad way whether you go to OCC or any college.

Sep 7-5:01 PM

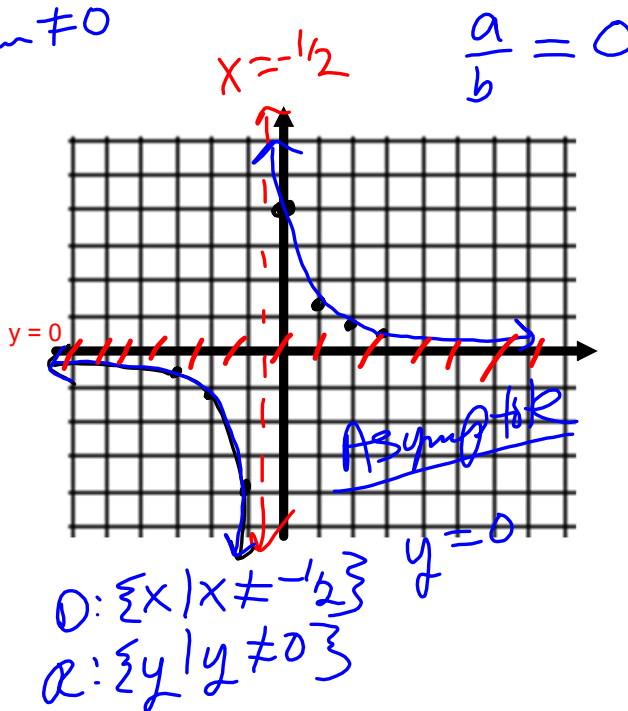
Go back to Friday's Day 3 notes

2. $f(x) = \frac{4}{(2x+1)}$

denom $\neq 0$

denom $\neq 0$
 $2x+1 \neq 0$
 $2x \neq -1$
 $x \neq -\frac{1}{2}$
 (asymptote)

X	y
-3	-0.8
-2	-1.3
-1	-4
0	4
1	1.3
2	0.8
3	0.6



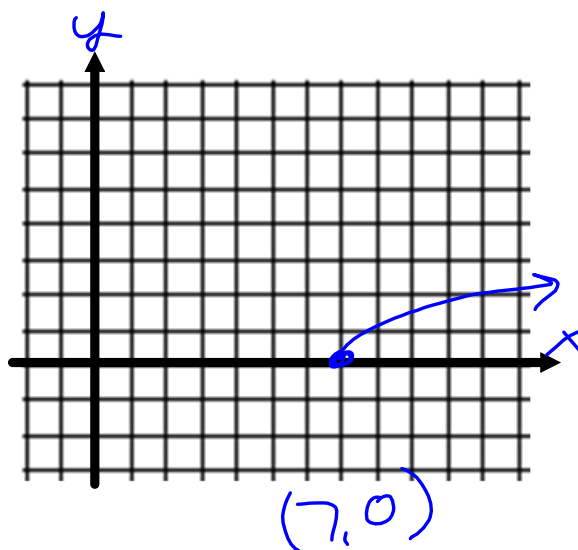
Aug 26-7:43 PM

3. $y = \sqrt{x-7}$ real # function

$$\begin{aligned} \text{radicand} &\geq 0 \\ x-7 &\geq 0 \\ \underline{x &\geq 7} \end{aligned}$$

x	y
7	0
8	1
9	1.4

$$\begin{aligned} D: \{x | x \geq 7\} \\ R: \{y | y \geq 0\} \end{aligned}$$



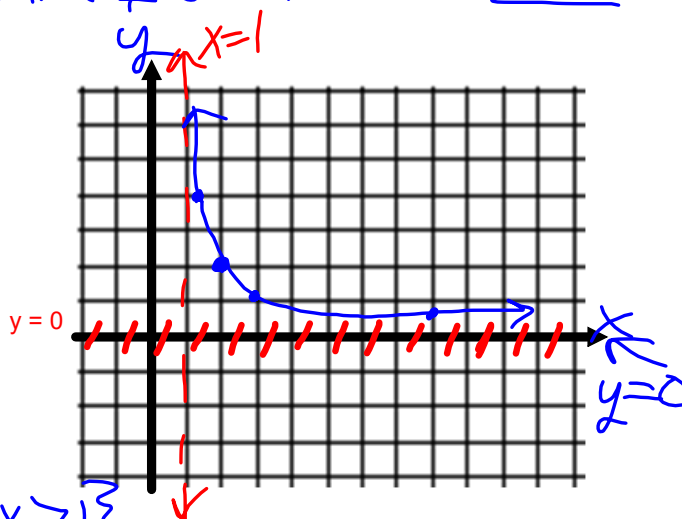
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4. $y = \frac{2}{\sqrt{x-1}}$

$$\begin{aligned} \text{radicand} &\geq 0 \\ \text{denom} &\neq 0 \end{aligned} \quad \text{radicand} > 0$$

$x-1 > 0$	
$x > 1$	
x	y
2	2
4	1.15
5	1
10	.67
1.25	4

$$\begin{aligned} D: \{x | x > 1\} \\ R: \{y | y > 0\} \end{aligned}$$



Aug 26-7:43 PM

Answers Chapter 1 Ditto 1

Graded HW 1 Due next Tuesday

1. D: $\{x|x \neq 5/2\}$
R: $\{y|y \neq 0\}$

2. D: $\{x|x < 5/2\}$
R: $\{y|y > 0\}$

3. D: $\{x|x \geq 2\}$
R: $\{y|y \geq 0\}$

4. D: $\{x|x < -1 \text{ or } x > 4\}$
R: $\{y|y > 0\}$

5. D: $\{x|-4 < x \leq 5, x \neq 2\}$
R: $\{y|-2 \leq y < 5\}$

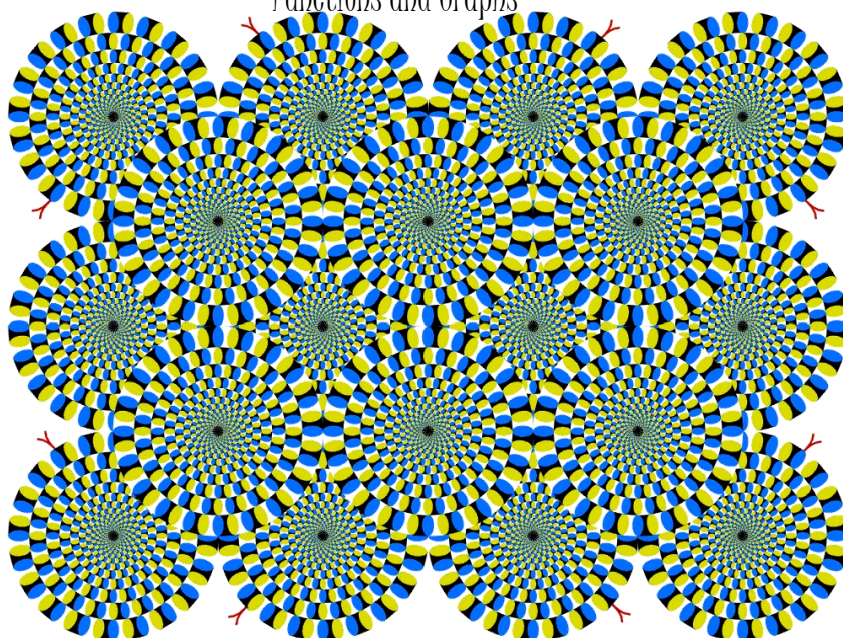
6. D: $\{x|-5 \leq x < 5\}$
R: $\{y|-3 < y < 4\}$

7. D: $\{x|x \geq -3\}$
R: $\{y|y \in \mathbb{R}\}$

8. D: $\{x|-2 < x < 4\}$
R: $\{y|-4 < y < 5\}$

Sep 8-5:25 PM

Functions and Graphs



Here's a weird optical illusion. It's not an animated picture but your eyes create the illusion of movement. Focus on one of the black dots.

Sep 8-4:21 PM

FUNCTIONS

Day	# cans recycled	Lbs of aluminum
M	7500	300
T	8000	315
W	7000	285
T	7500	310
F	8500	340

IS THIS A FUNCTION?

WHICH IS THE DEPENDENT VARIABLE?

Sep 8-5:15 PM

Summary of Domain. 4 cases.

Restrictions on the domain occur when:

1. Variable in the Denominator

Looks Like: $\frac{1}{x}$

To Solve: $\text{denom} \neq 0$

2. Variable Under the Radical

Looks Like: $\sqrt{x}$

To Solve: $\text{radicand} \geq 0$

3. Variable Under a Radical in the Denominator

Looks Like: $\frac{1}{\sqrt{x}}$

To Solve: $\text{radicand} > 0$

4. No Troubles

Domain: $\{x | x \in \mathbb{R}\}$ or $(-\infty, \infty)$

Aug 26-7:48 PM

Evaluate each for $f(-3)$, then state the domain and range for each.

1. $f(x) = x^2 - 2x - 5$

$f(-3) = (-3)^2 - 2(-3) - 5 = 9 + 6 - 5 = 10$

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

range: $f(1) = 1 - 2 - 5 = -6$

$\{y | y \geq -6\}$

$y = \sqrt{x}$

radicand ≥ 0

$6x + 34 \geq 0$

$6x \geq -34$

$x \geq -\frac{34}{6} \quad x \geq -\frac{17}{3}$

2. $f(x) = \sqrt{6x + 34}$

$f(-3) = \sqrt{6(-3) + 34} = \sqrt{-18 + 34} = \sqrt{16} = 4$

domain: $\{x | x \geq -\frac{17}{3}\}$

range: $\{y | y \geq 0\}$

Sep 8-5:19 PM

Find the domain algebraically. Use a graphing calculator to find the range and to verify your answer for the domain.

3. $f(x) = \frac{3}{(x-1)}$

$x-1 \neq 0$
 $x \neq 1$

D: $\{x | x \neq 1\}$

R: $\{y | y \neq 0\}$

$D = \frac{0}{1}$

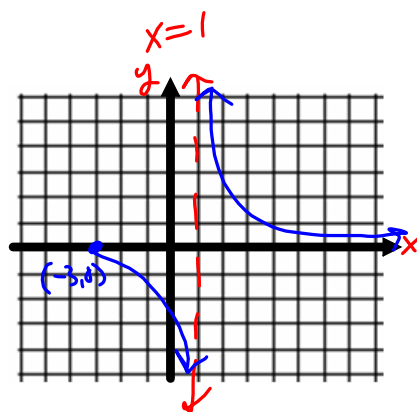
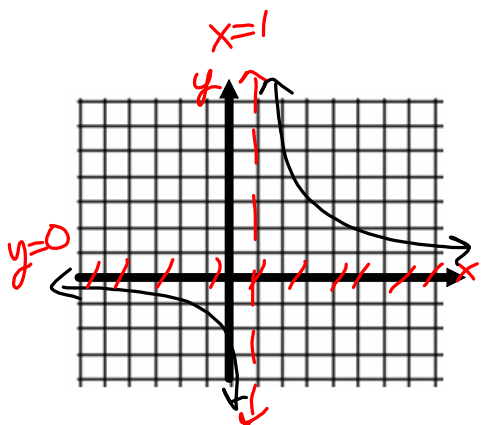
4. $g(x) = \frac{\sqrt{x+3}}{(x-1)}$

$x+3 \geq 0$
 $x \geq -3$

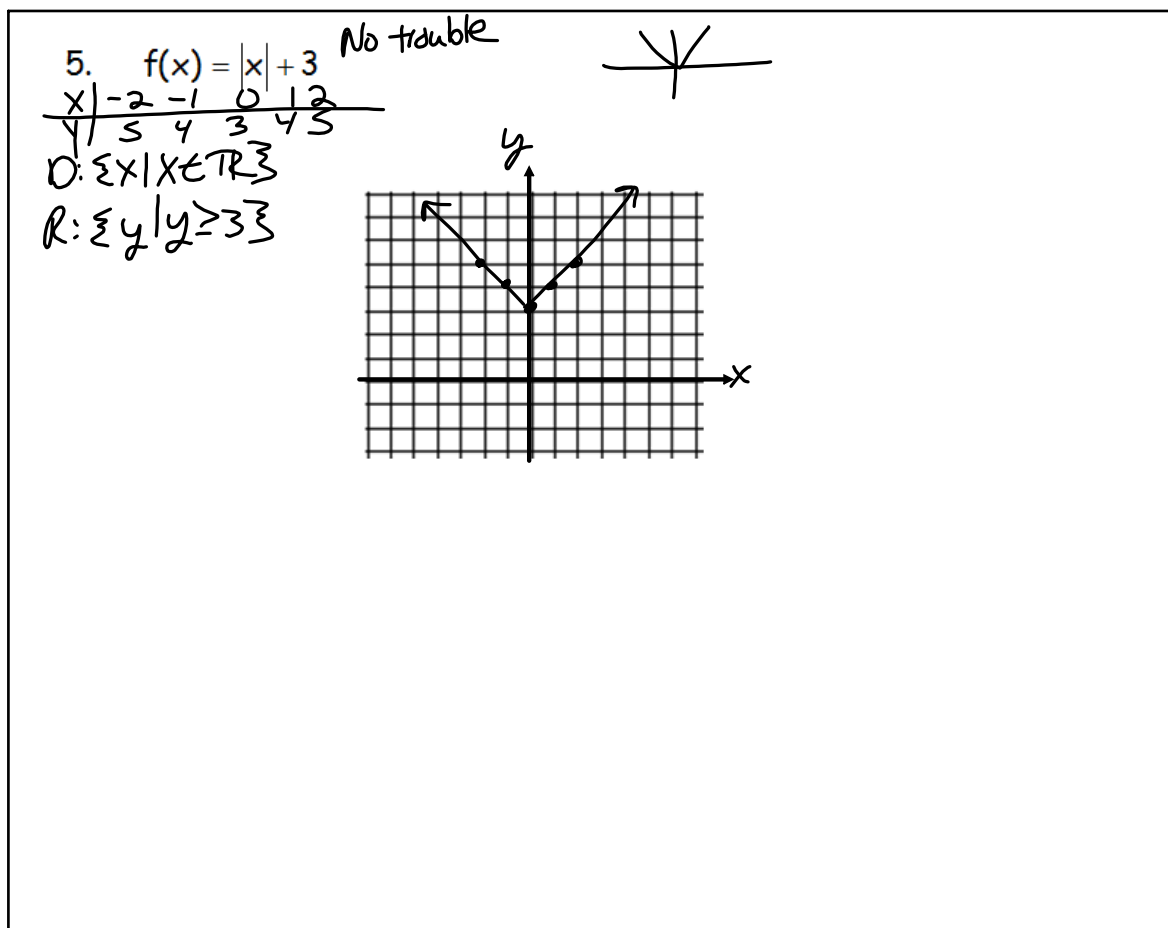
$x-1 \neq 0$
 $x \neq 1$

D: $\{x | x \geq -3, x \neq 1\}$

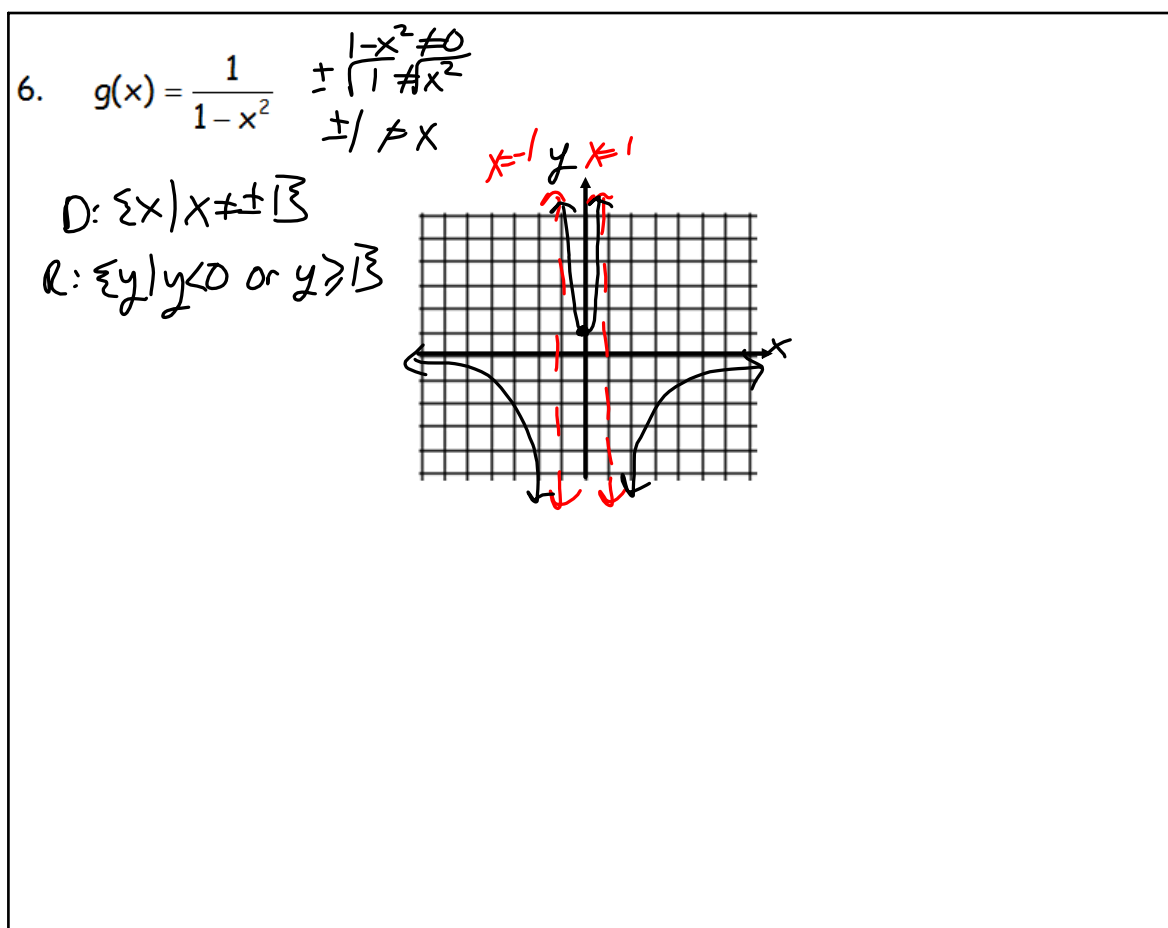
R: $\{y | y \in \mathbb{R}\}$



Sep 8-5:19 PM



Sep 9-7:03 AM



Sep 9-7:04 AM

7. $f(x) = \frac{x^2 - 18}{x^2 - 3x - 4}$

denom $\neq 0$

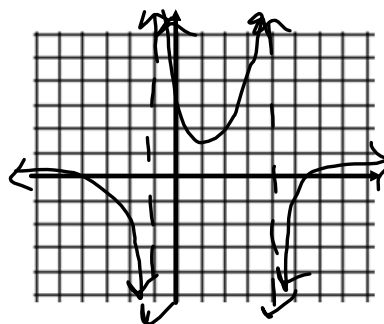
$x^2 - 3x - 4 \neq 0$ $p = -4, 3$
 $s = -4, 1$

$(x-4)(x+1) \neq 0$

$x-4 \neq 0 \mid x+1 \neq 0$

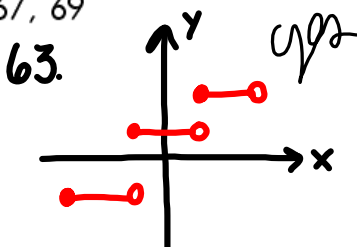
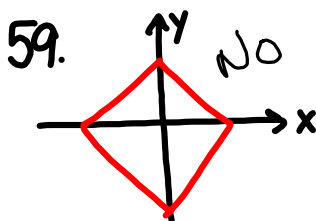
$x \neq 4 \mid x \neq -1$

$D: \{x \mid x \neq -1, 4\}$

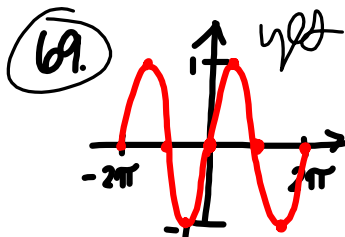
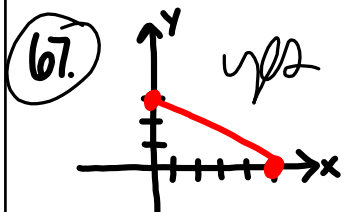


Sep 9-7:04 AM

In text, pg 89: 59, 63, 67, 69



} function?



} $D \in \mathbb{R}$

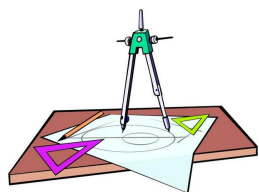
$D: \{x \mid 0 \leq x \leq 5\}$

$R: \{y \mid 0 \leq y \leq 3\}$

$D: \{x \mid -2\pi \leq x \leq 2\pi\}$

$R: \{y \mid -1 \leq y \leq 1\}$

Sep 8-5:21 PM



Homework:
WS 1-4
pg 89: 60 - 70 Even

QUIZ Friday



Sep 21-5:14 PM

Sep 10-8:22 PM