

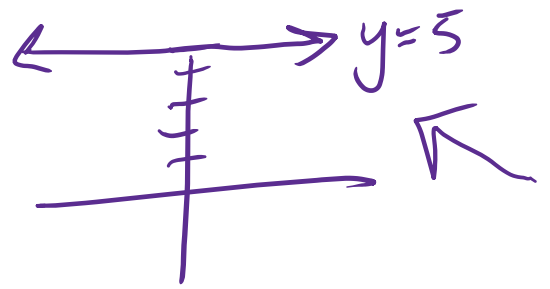
Alg 3/Trig

Parent Functions

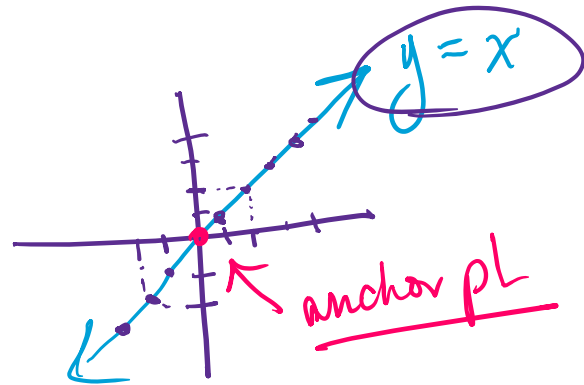
2.4

p. 219

- a) constant fcn $f(x) = c$
 $y = \#$



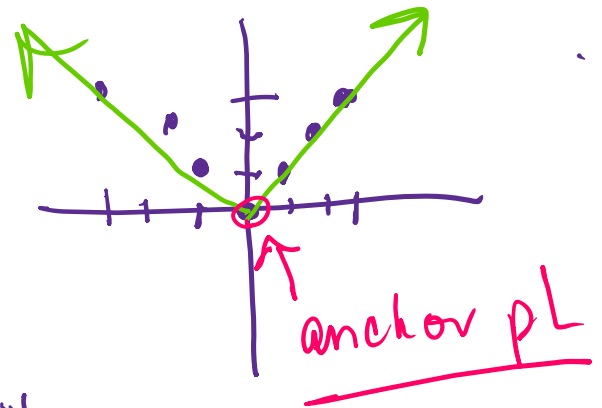
- b) identity fcn $f(x) = x$
 $y = x$



- c) Absolute Value fcn

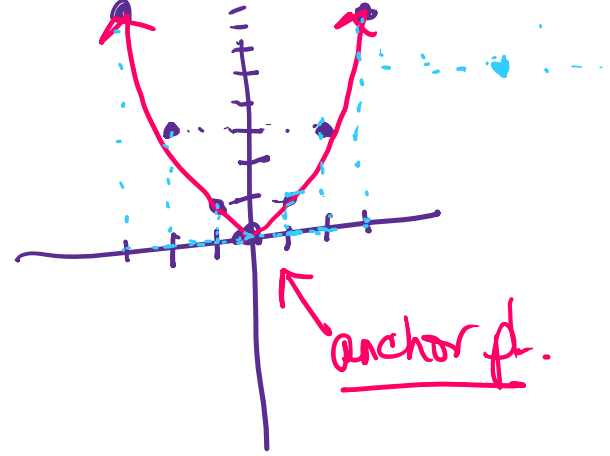


$$f(x) = |x|$$
$$y = |x|$$



x	y = x
0	0
1	1
2	2
3	3
-1	1
-2	2
-3	3

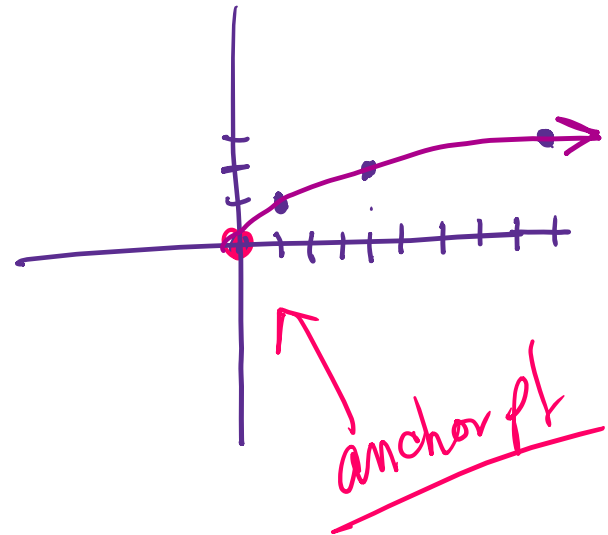
e) Quadratic fun $f(x) = x^2$
 $y = x^2$



"dance"

x	y
0	0
1	1
2	4
3	9
-1	+1
-2	+4
-3	+9

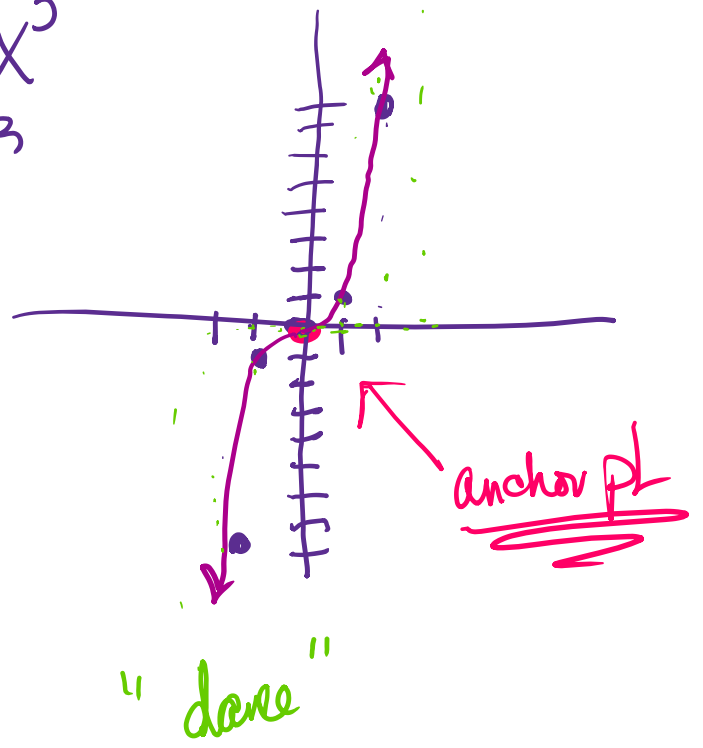
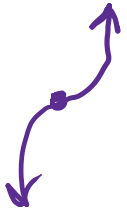
d) Square Root fun $f(x) = \sqrt{x}$
 $y = x$



x	y
0	0
1	1
4	2
9	3
-1	imaginary

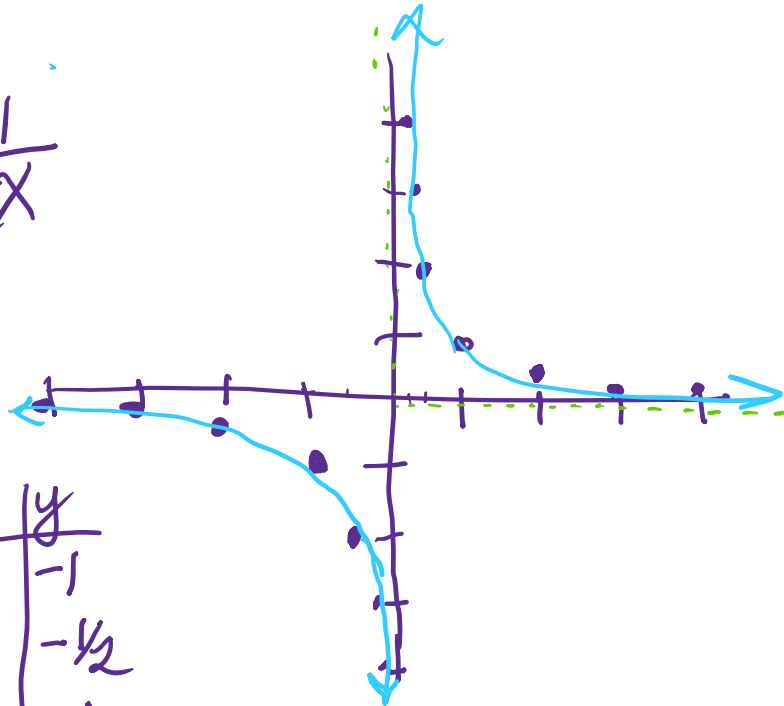
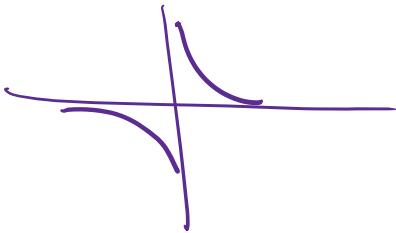
$D: \{x: x \in \mathbb{R}; x \geq 0\}$

f) Cubic Function $f(x) = x^3$
 $y = x^3$



x	y
0	0
1	1
2	8
3	27
-1	-1
-2	-8

g) Reciprocal Fcn $f(x) = \frac{1}{x}$



x	y	x	y
0	undefined	-1	-1
1	1	-2	-1/2
2	1/2	-3	-1/3
3	1/3	-4	-1/4
4	1/4	-1/2	1/(-1/2) = -2
1/2	1/(1/2) = 2/1 = 2	-1/3	= -3
1/3	1/(1/3) = 3/1 = 3	-1/4	= -4
1/4	1/(1/4) = 4/1 = 4		

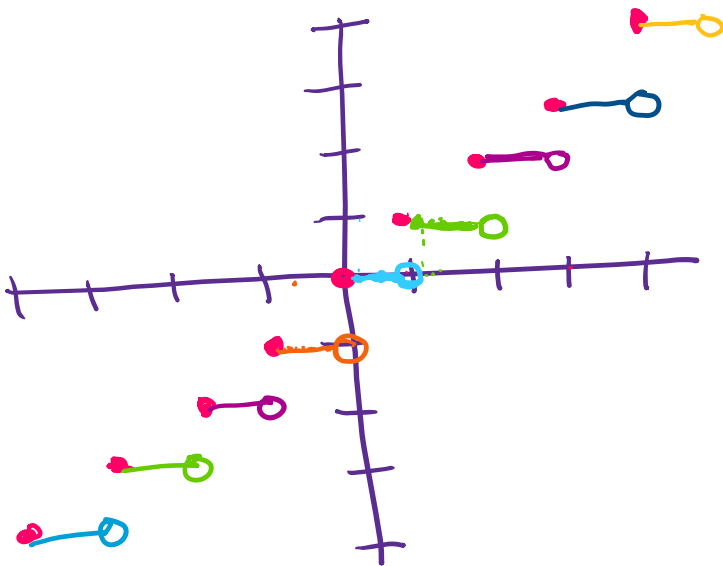
• Greatest Integer Fun

$$f(x) = \lfloor x \rfloor$$



→ "the greatest integer less than or Equal to x "

x	y	x	y
0	0	$\frac{1}{10}$	0
1	1	$\frac{1}{2}$	0
2	2	$\frac{7}{8}$	0
3	3	1.1	1
4	4	1.2	1
-1	-1	1.999	1
-2	-2	$-\frac{1}{2}$	-1
-3	-3		
-4	-4		



EX 3

$$f(x) = \begin{cases} \underline{2x+3}, & \underline{x \leq 1} \\ \underline{-x+4}, & \underline{x > 1} \end{cases}$$

