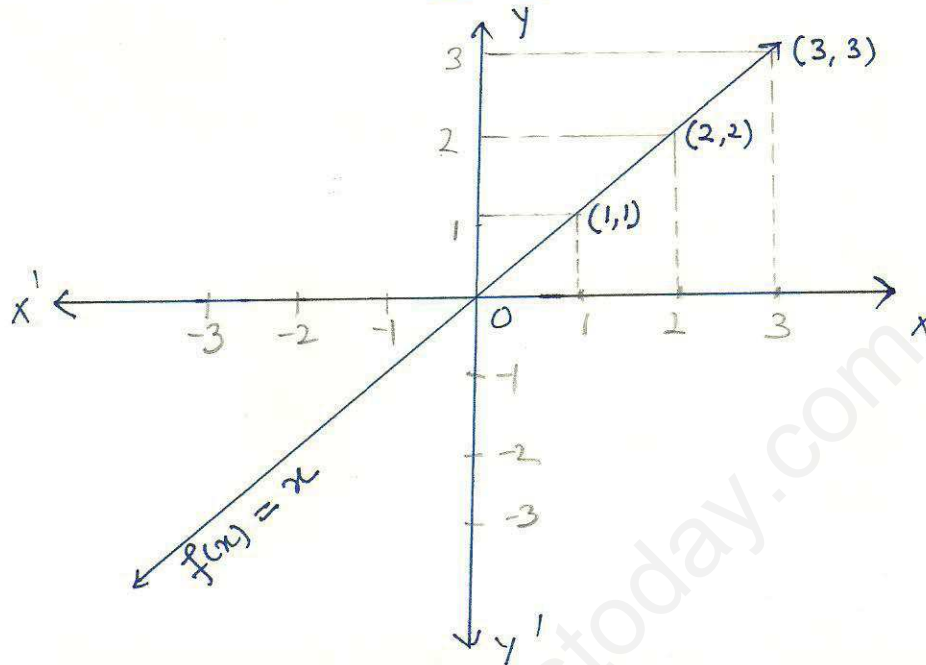


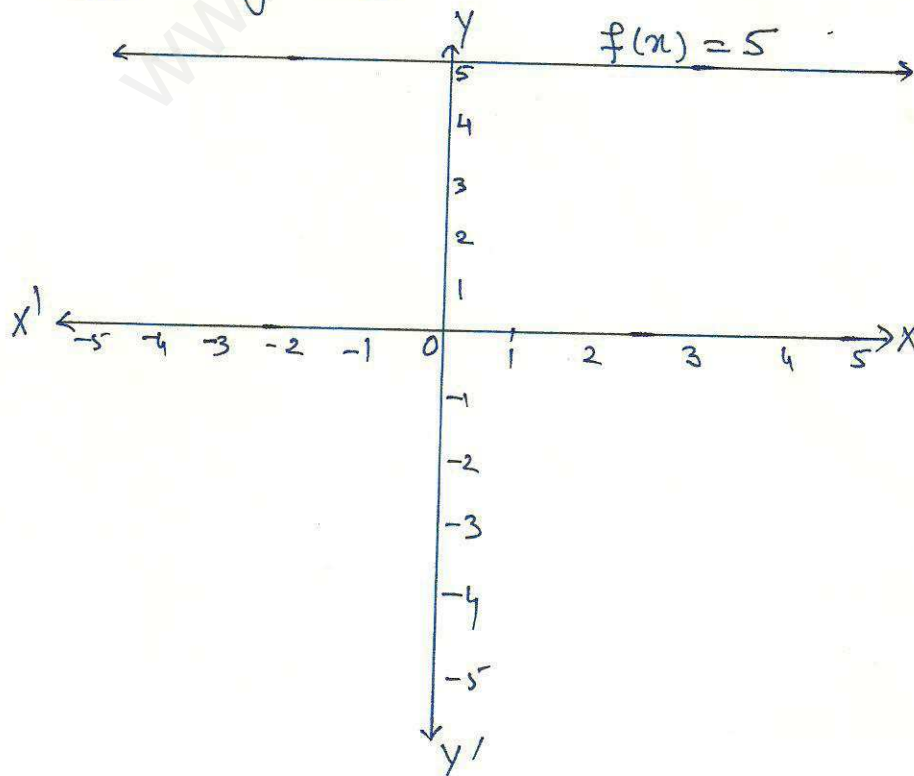
Sketching of the graphs

1. Identity Function :-  $f(x) = x, x \in \mathbb{R}$   
 let  $y = x$

x	1	2	3
y	1	2	3



2. Constant Function :-  $f(x) = \text{constant} = 5$  (let)  
 (or any number),  $x \in \mathbb{R}$   
 let  $y = 5$

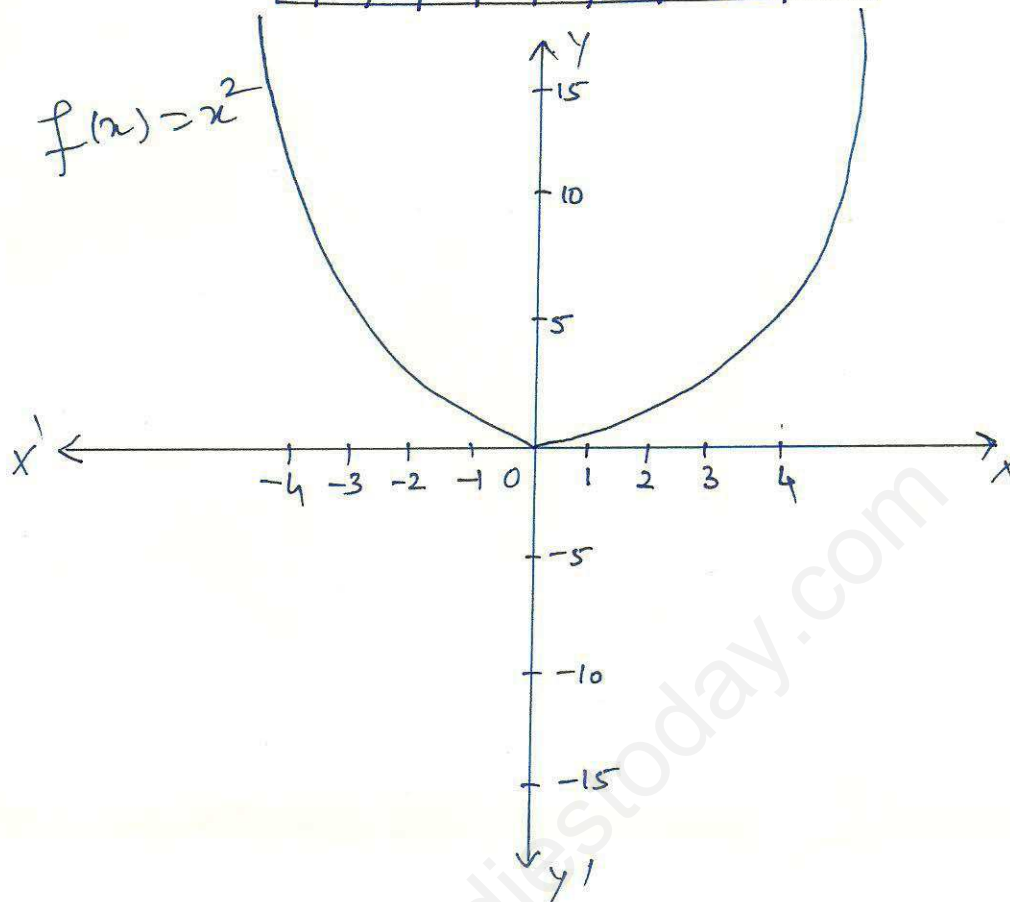


Cont-Pg 3

3. Polynomial Function :-  $f(x) = x^2, x \in \mathbb{R}$

Let  $y = x^2$

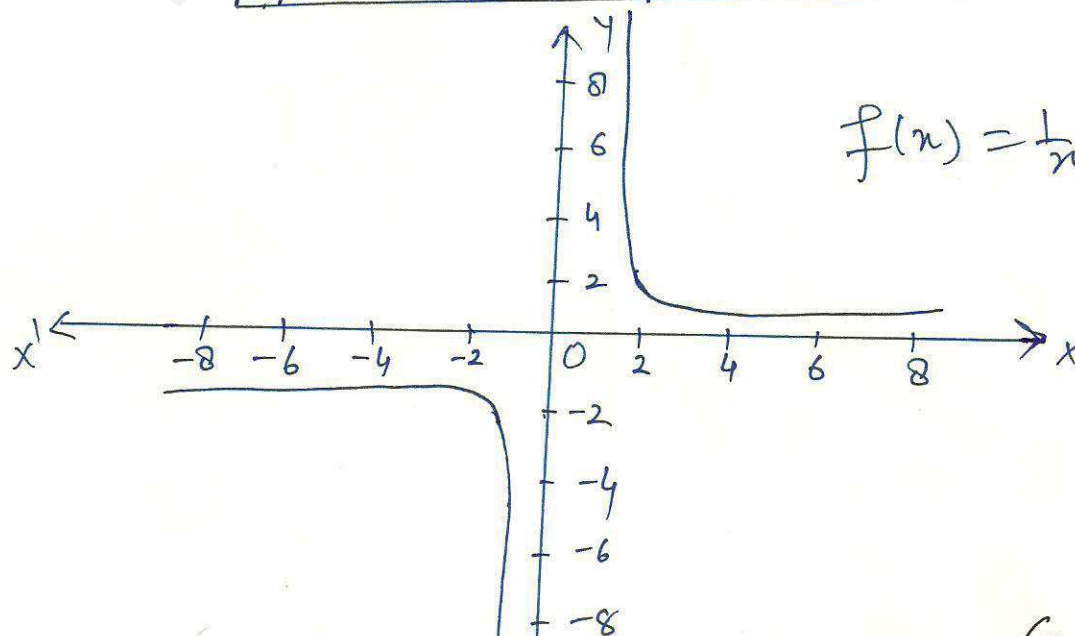
x	0	1	-1	2	-2	3	-3	4	-4
y	0	1	1	4	4	9	9	16	16



4. Rational Function :-  $f(x) = \frac{1}{x}, x \in \mathbb{R}$

Let  $y = \frac{1}{x}$

x	1	-1	2	-2	-1.5	-0.5	0.25	0.5	1.5
y	1	-1	0.5	-0.5	-0.67	-2	4	2	0.67



Cont - Pg 4

5. Modulus Function :  $f(x) = |x|, x \in \mathbb{R}$

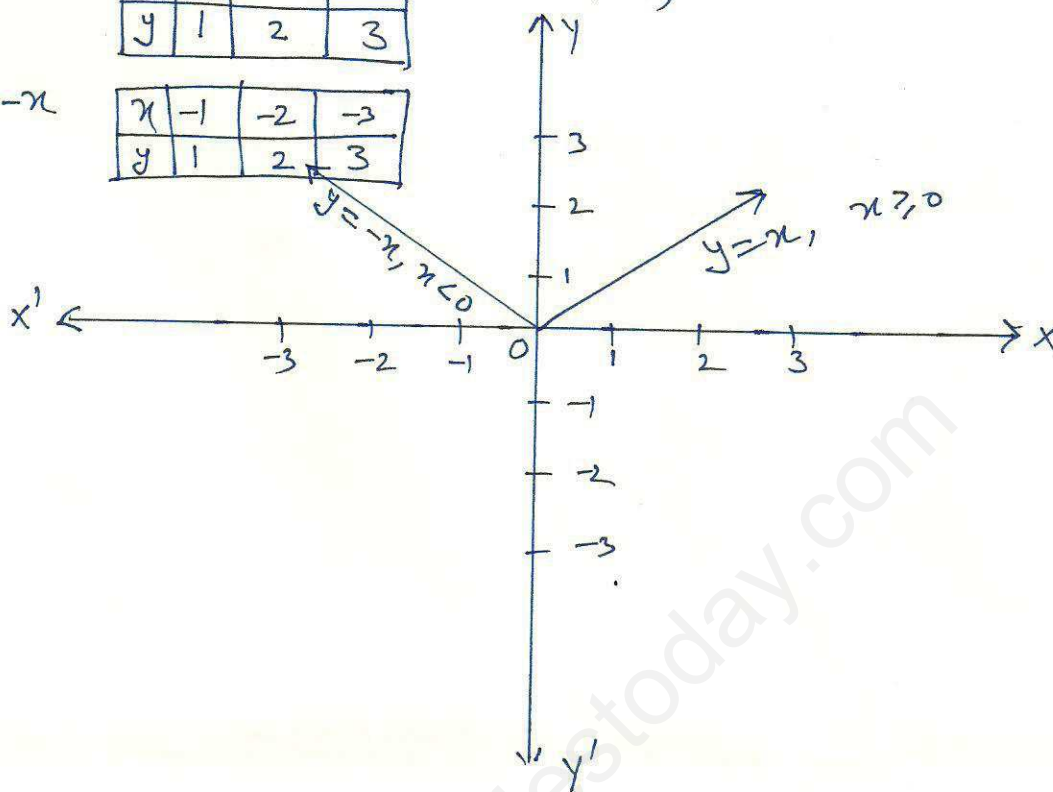
Let  $y = |x|$   $\begin{cases} +x, & x \geq 0 \\ -x, & x < 0 \end{cases}$

$y = x$

x	1	2	3
y	1	2	3

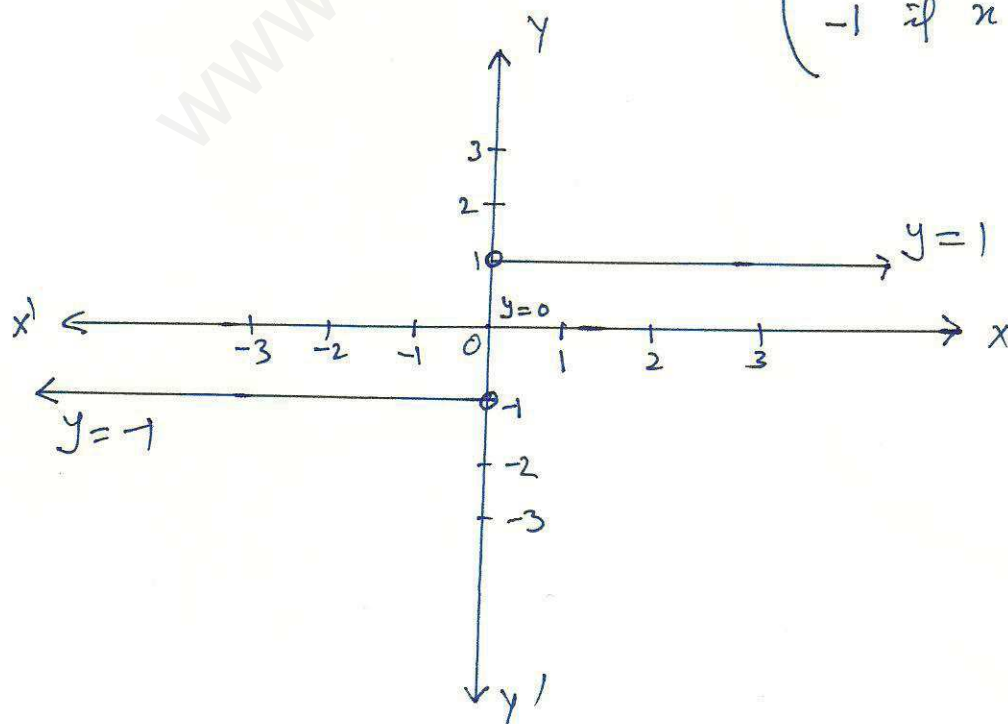
$y = -x$

x	-1	-2	-3
y	1	2	3



6.

Signum Function :  $f(x) = \begin{cases} 1 & \text{if } x > 0 \\ 0 & \text{if } x = 0 \\ -1 & \text{if } x < 0 \end{cases}, x \in \mathbb{R}$



Cont Pg 5

7. Greatest Integer Function:-  $f(x) = [x]$ ,  $x \in \mathbb{R}$

Let  $y = [x]$ , By definition, the greatest integer is less than or equal to  $x$

if  $y = [x] = -1$ ,  $-1 \leq x < 0$

if  $y = [x] = 0$ ,  $0 \leq x < 1$

if  $y = [x] = 1$ ,  $1 \leq x < 2$

if  $y = [x] = 2$ ,  $2 \leq x < 3$  and so on.

if  $y = [x] = 3$ ,  $3 \leq x < 4$

