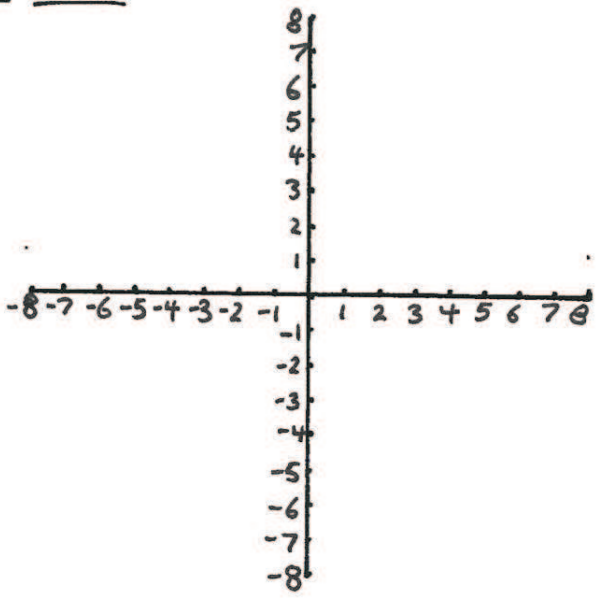
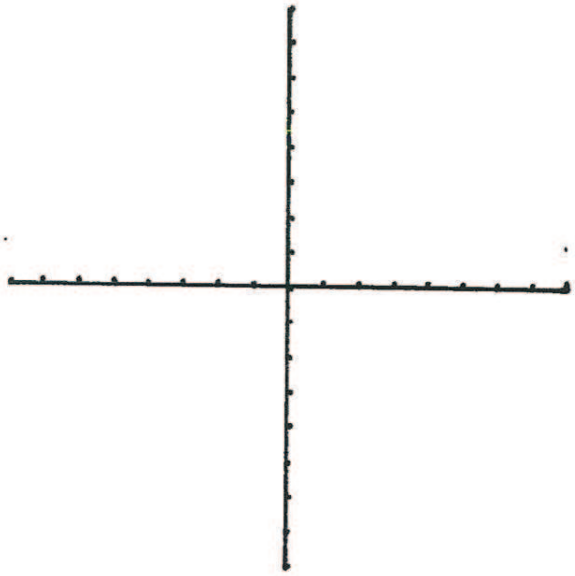
Examples of graphs

1.) $f: \mathbb{R} \to \mathbb{R}$, $f(x) = x^2$

x	$f(x)$	$(x, f(x))$
-2	$f(-2) = (-2)^2 = 4$	$(-2, 4)$
-1		
0		
1		
2		

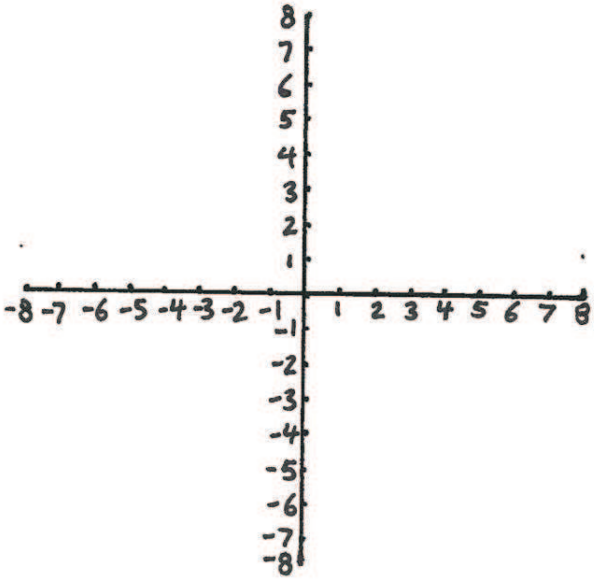


2.) Graph of $g: \mathbb{R} \to \mathbb{R}$, $g(x) = x^n$ where $n \in \mathbb{N}$ is even looks similar to graph of $f(x) = x^2$

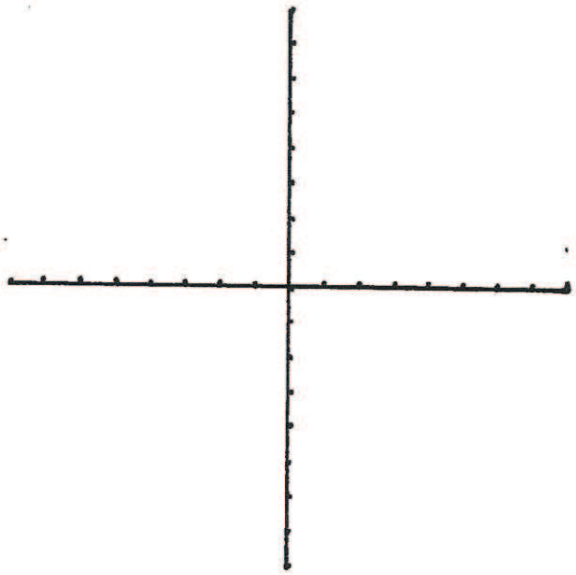


3.) $h: \mathbb{R} \to \mathbb{R}$, $h(x) = x^3$

x	$h(x)$	$(x, h(x))$
-2		
-1		
0		
1		
2		

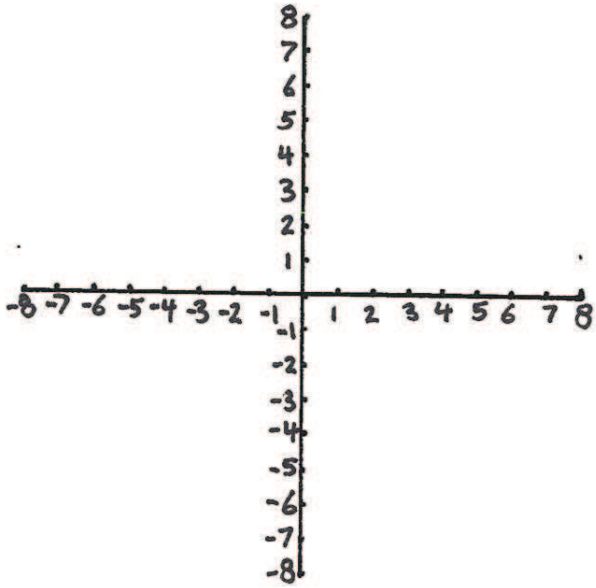


4.) Graph of
$f: \mathbb{R} \to \mathbb{R}$, $f(x) = x^n$ where $n \in \mathbb{N}$, $n \geq 3$, and n is odd looks similar to graph of $h(x) = x^3$



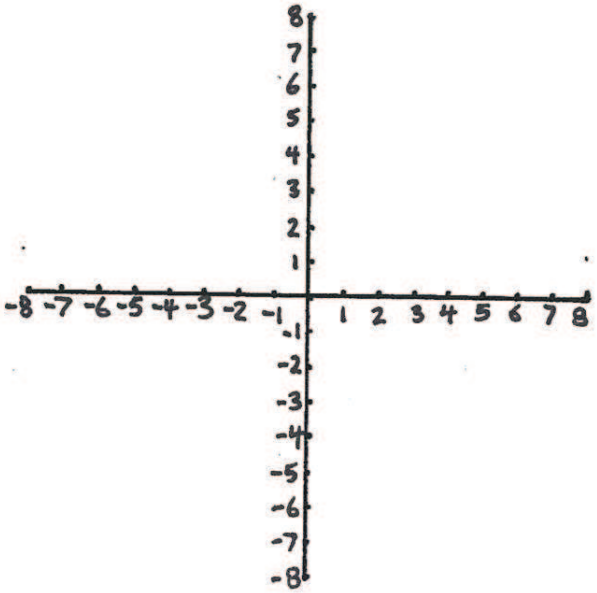
5.) $id: \mathbb{R} \to \mathbb{R}$

x	$id(x)$	$(x, id(x))$
-2		
-1		
0		
1		
2		

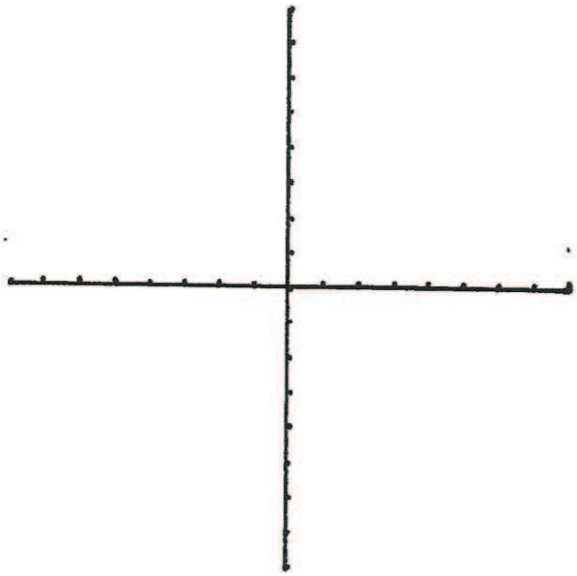


6.) $g: \mathbb{R} - \{0\} \to \mathbb{R}$, $g(x) = \frac{1}{x}$

x	$g(x)$	$(x, g(x))$
1		
2		
3		
4		
$\frac{1}{2}$		
$\frac{1}{3}$		
$\frac{1}{4}$		

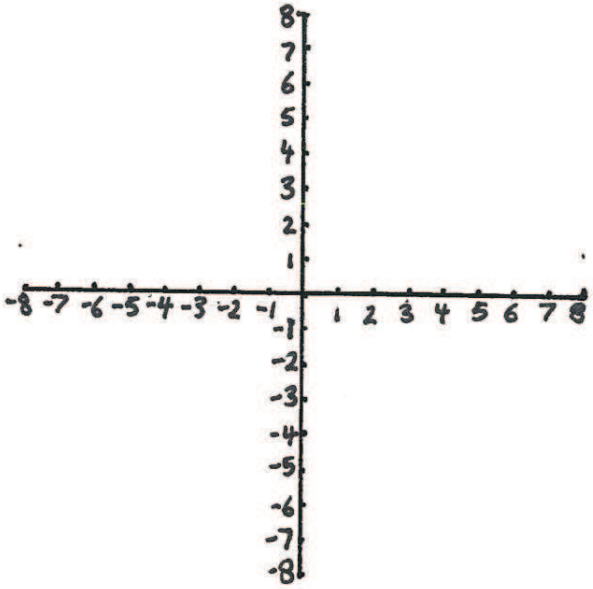


7.) Graph of
$h: \mathbb{R} - \{0\} \longrightarrow \mathbb{R}$, $h(x) = \frac{1}{x^n}$
where $n \in \mathbb{N}$ is odd looks
similar to graph of $g(x) = \frac{1}{x}$

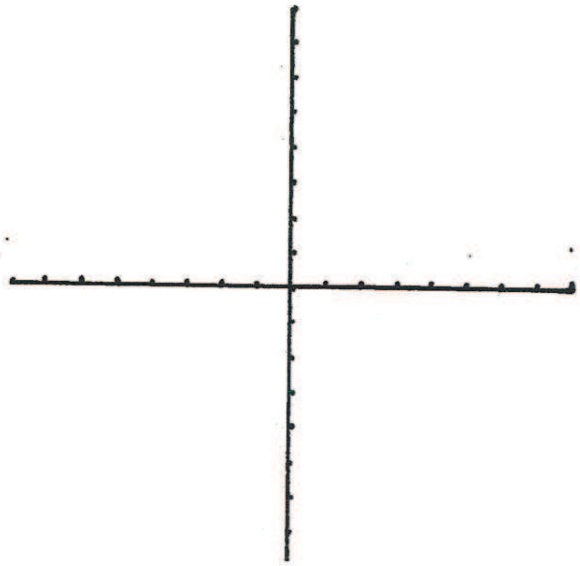


8.) $f: \mathbb{R} - \{0\} \longrightarrow \mathbb{R}$, $f(x) = \frac{1}{x^2}$

x	$f(x)$	$(x, f(x))$
1		
2		
3		
4		
$\frac{1}{2}$		
$\frac{1}{3}$		
$\frac{1}{4}$		

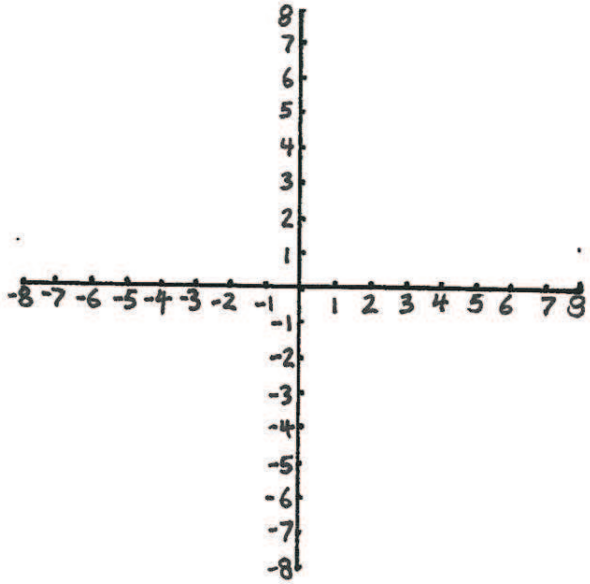


9.) Graph of $g: \mathbb{R} - \{0\} \longrightarrow \mathbb{R}$, $g(x) = \frac{1}{x^n}$
where $n \in \mathbb{N}$ is even looks
similar to graph of $f(x) = \frac{1}{x^2}$



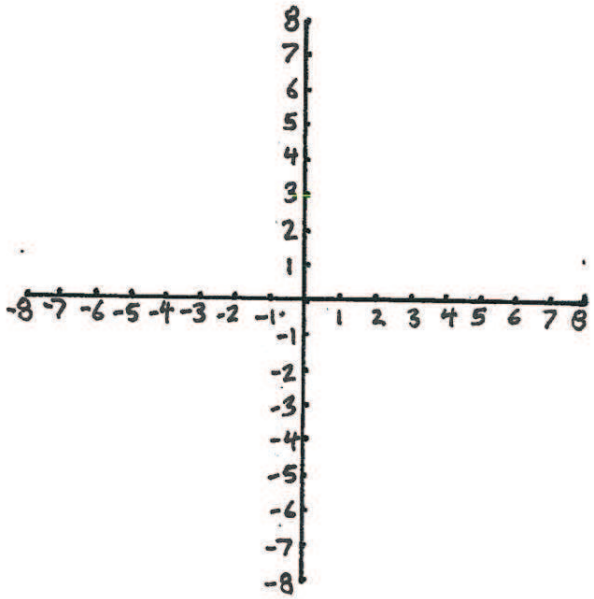
10.) $h : \mathbb{R} \to \mathbb{R}$, $h(x) = 2$

x	$h(x)$	$(x, h(x))$
-7		
-2		
0		
3		
5		



11.) $f : \mathbb{R} \to \mathbb{R}$, $f(x) = -5$

x	$f(x)$	$(x, f(x))$
-6		
-1		
0		
2		
8		



12.) Graph of $g : \mathbb{R} \to \mathbb{R}$, $g(x) = c$ (where $c \in \mathbb{R}$ is a constant so that g is a constant function) looks similar to the graphs of $h(x) = 2$ and $f(x) = -5$.