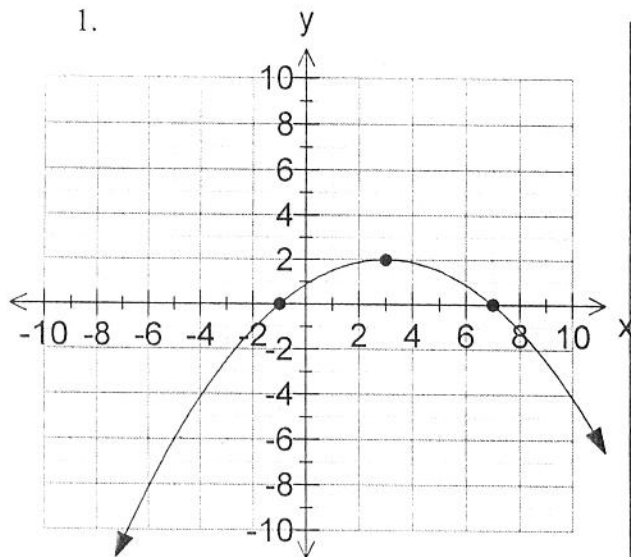


Name: Key

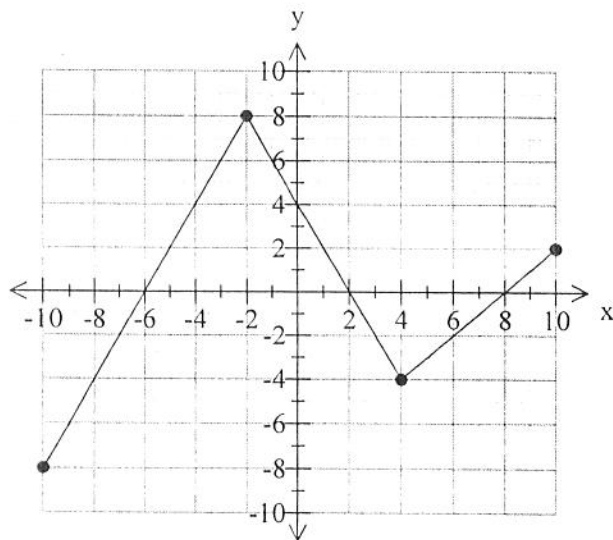
### Properties of Functions Practice ☺

1.



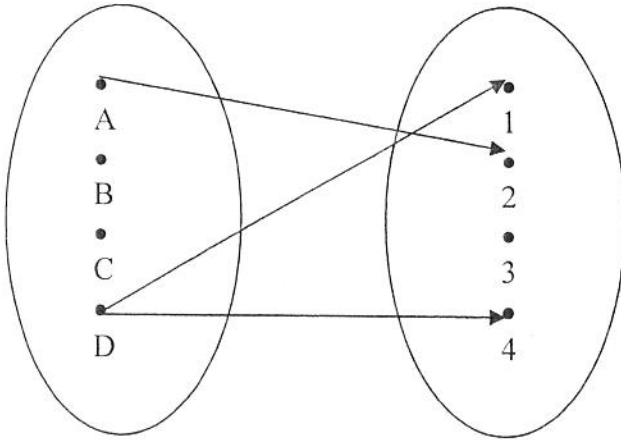
Is it a function?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (check one)
Domain:	$\mathbb{R}$
Range:	$]-\infty, 2]$
Maximum(abs/rel):	Abs: $\{2\}$ Rel: $\emptyset$
Minimum(abs/rel):	$\emptyset$
Positive:	$[-1, 7]$
Negative:	$-\infty, -1] \cup [7, \infty[$
Zeros:	$\{-1, 7\}$
Increasing:	$]-\infty, 3]$
Decreasing:	$[3, \infty[$

2.

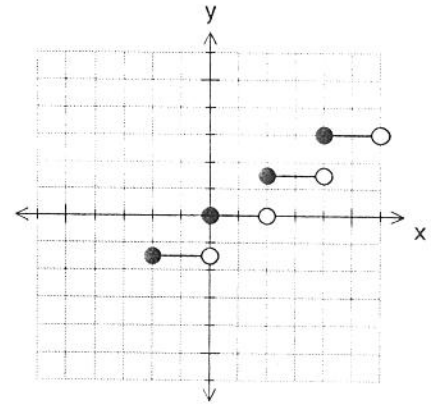


Is it a function?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (check one)
Domain:	$[-10, 10]$
Range:	$[-8, 8]$
Maximum (abs/rel):	Abs: $\{8\}$ Rel: $\emptyset$
Minimum (abs/rel):	Abs: $\{-8\}$ Rel: $\{-4\}$
Positive:	$[-6, 2] \cup [8, 10]$
Negative:	$[-10, -6] \cup [2, 8]$
Zeros:	$\{-6, 2, 8\}$
Increasing:	$[-10, -2] \cup [4, 10]$
Decreasing:	$[-2, 4]$

3. Indicate if the relation shown is a function or not. If so state the domain and range.



a) Yes  No  (check one)



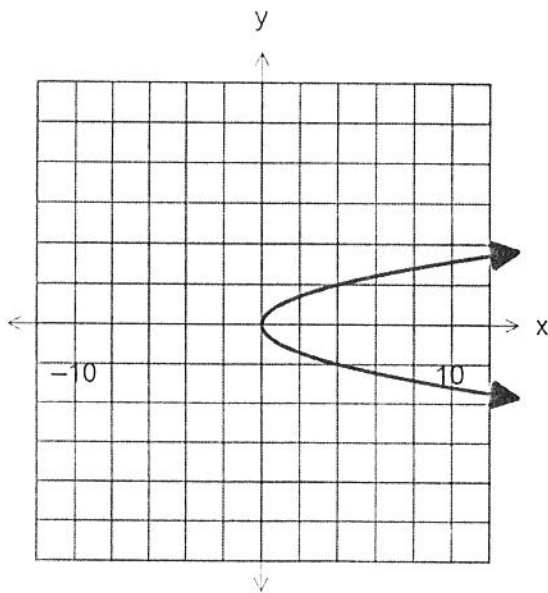
b) Yes  No  (check one)

$\{(0,0), (1,2), (3,2), (4,2)\}$

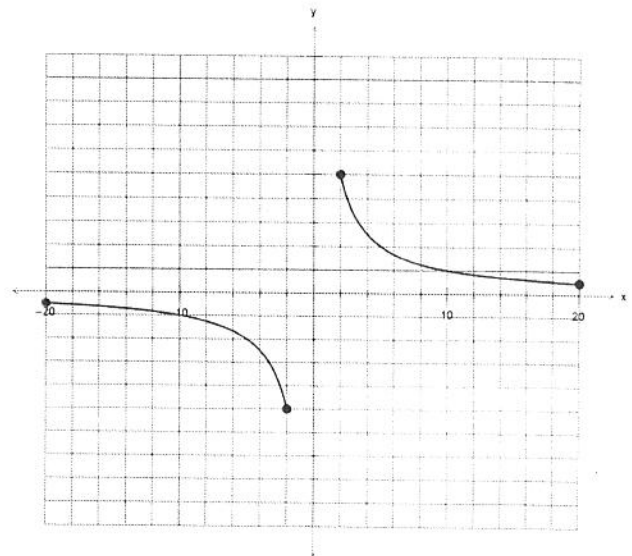
$$y = -2x + 4$$

c) Yes  No  (check one)

d) Yes  No  (check one)

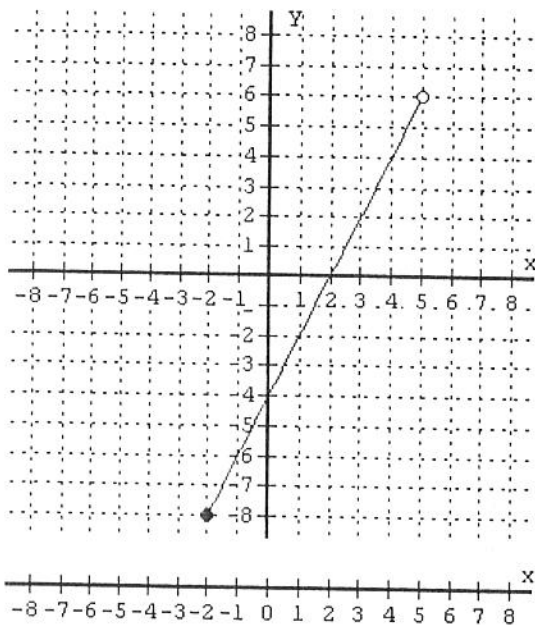


e) Yes  No  (check one)



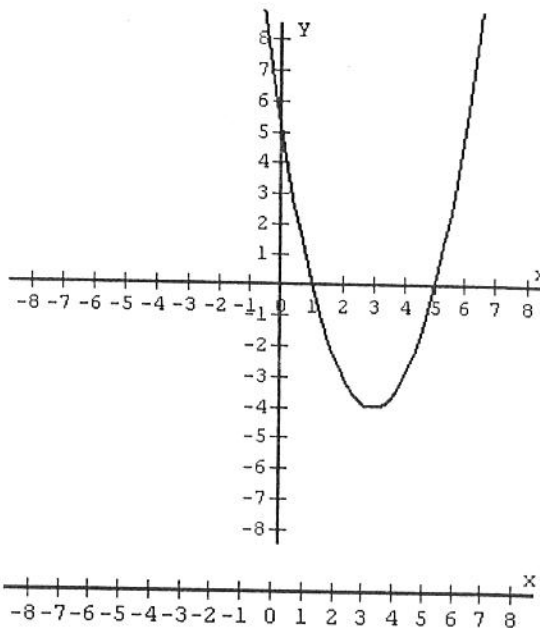
f) Yes  No  (check one)

# Examine the Graph 1



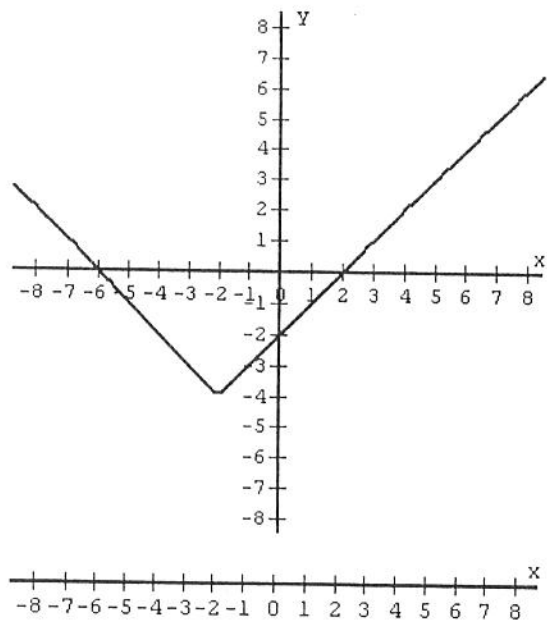
1) Where is  $f(x) \geq 0$  ?

Interval Notation  
 $[2, 5[$



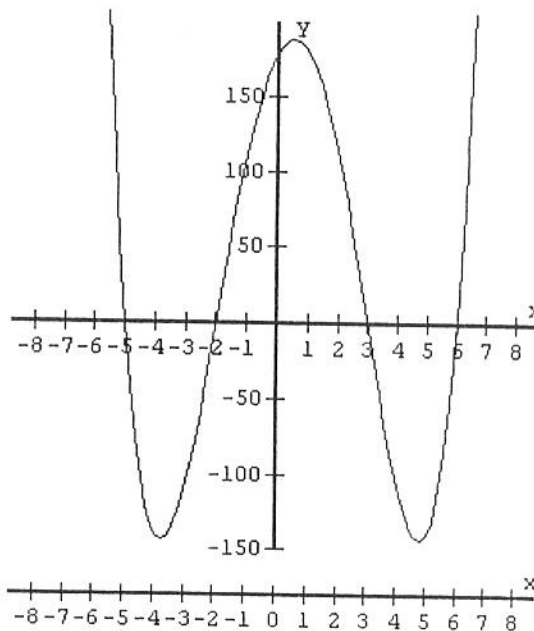
2) Where is  $f(x) \leq 0$  ?

Interval Notation  
 $[1, 5]$



3) Where is  $f(x) > 0$  ?

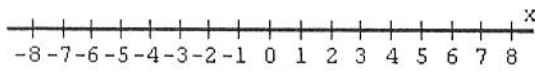
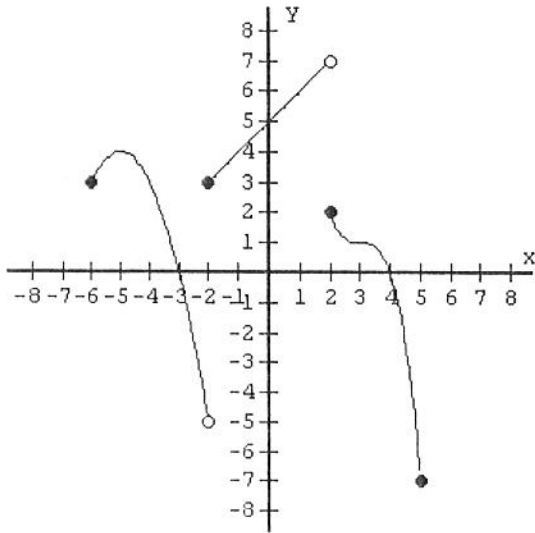
Interval Notation  
 $] -\infty, -6[ \cup ] 2, \infty[$



4) Where is  $f(x) < 0$  ?

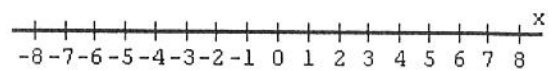
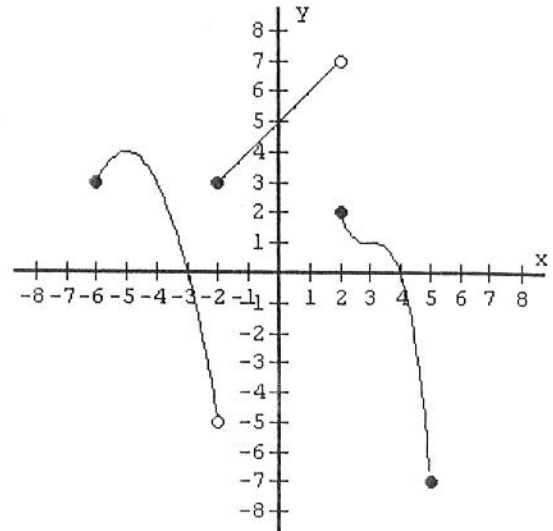
Interval Notation  
 $] -5, -2[ \cup ] 3, 5[$

## Examine the Graph 2



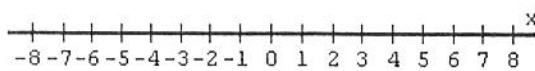
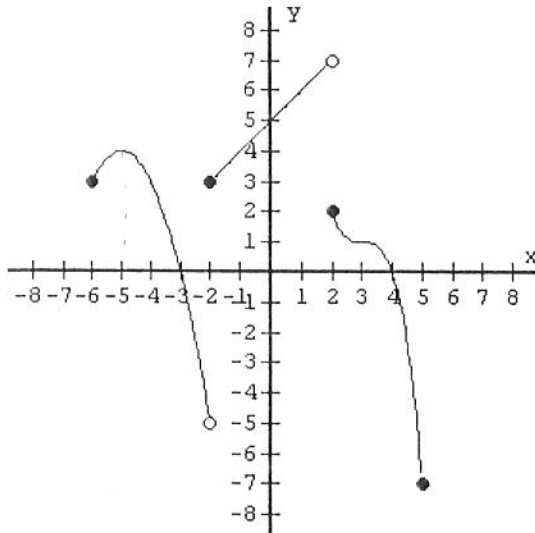
1) Where is  $f(x) > 0$  ?

Interval Notation  
 $[-6, -3[ \cup [-2, 4[$



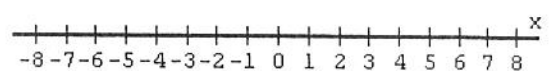
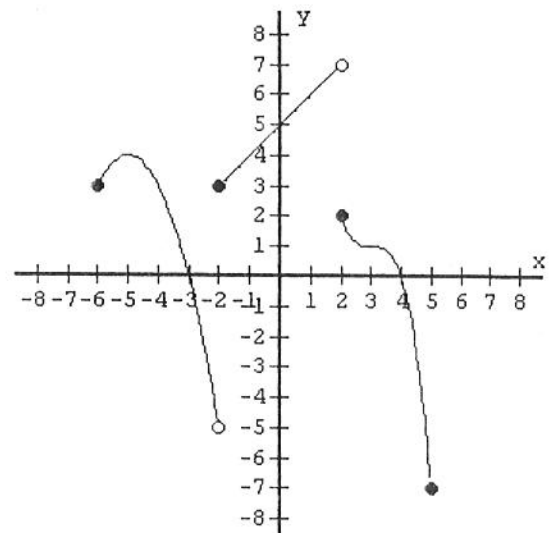
2) Where is  $f(x) \leq 0$  ?

Interval Notation  
 $[-3, -2[ \cup [4, 5]$



3) Where is  $f(x)$  increasing ?

Interval Notation  
 $[-6, -5] \cup [-2, 2[$



4) Where is  $f(x)$  decreasing?

Interval Notation  
 $[-5, -2[ \cup [2, 5]$