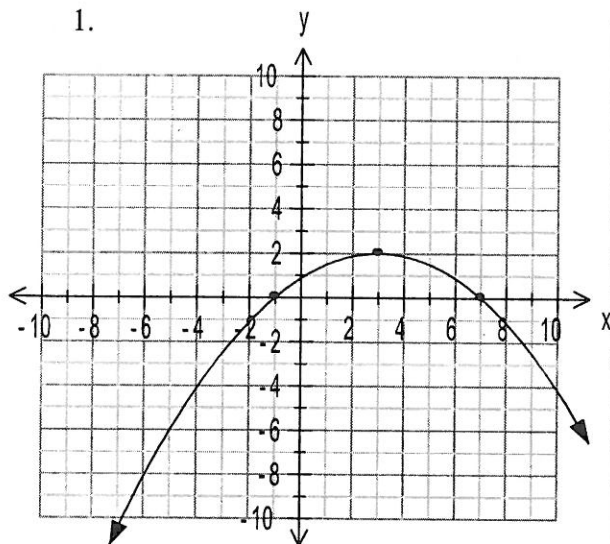


Name: Key

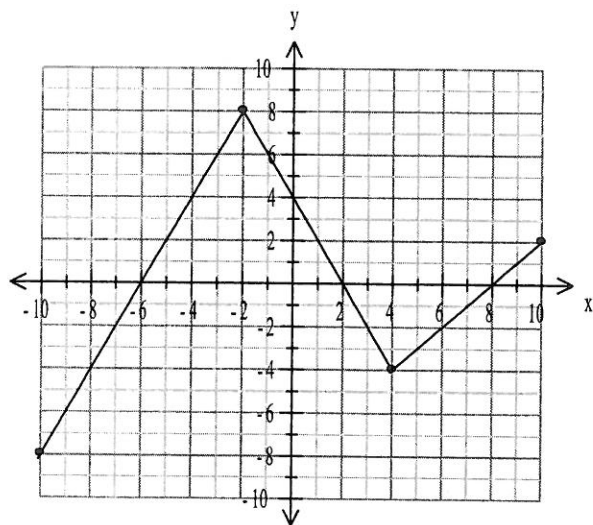
Properties of Functions Practice ☺

1.



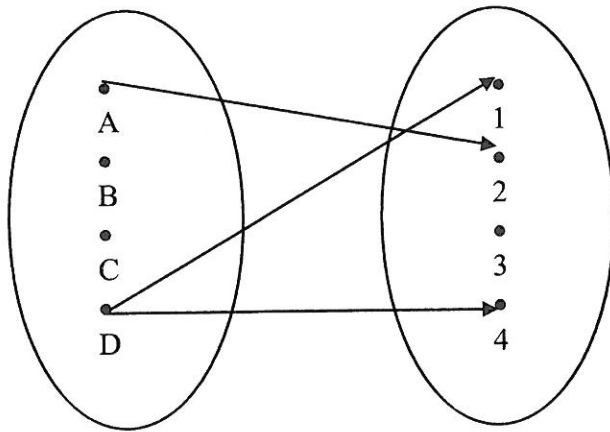
Is it a function?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (check one)
Domain:	\mathbb{R}
Range:	$]-\infty, 2]$
Maximum(abs/rel):	Abs 2
Minimum(abs/rel):	\emptyset
Positive:	$[-1, 7]$
Negative:	$]-\infty, -1] \cup [7, \infty[$
Zeros:	$\{-1, 7\}$
Increasing:	$]-\infty, 3]$
Decreasing: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

2.

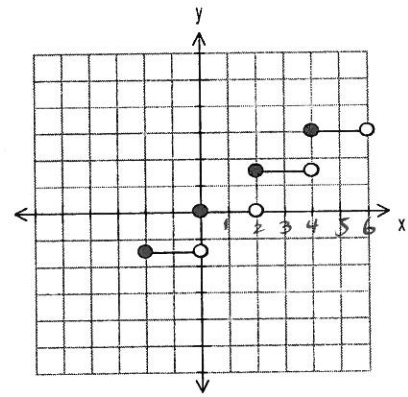


Is it a function?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (check one)
Domain:	$[-10, 10]$
Range:	$[-8, 8]$
Maximum (abs/rel):	Abs 8
Minimum (abs/rel):	Abs -8 Rel -4
Positive:	$[-6, 2] \cup [8, 10]$
Negative:	$[-10, -6] \cup [2, 8]$
Zeros:	$\{-6, 2, 8\}$
Increasing:	$[-10,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



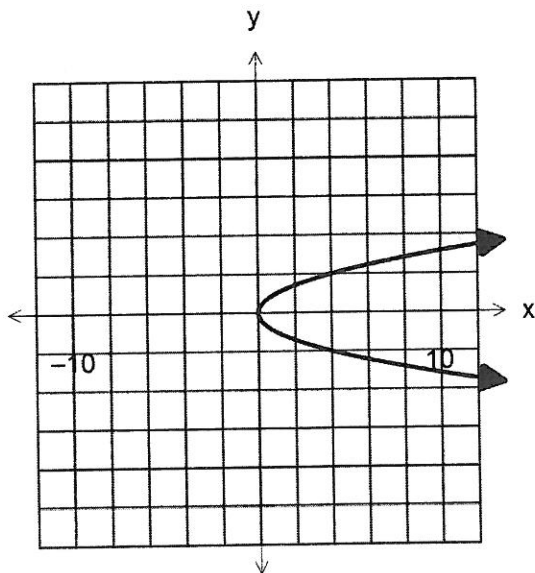
b) Yes No (check one)

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

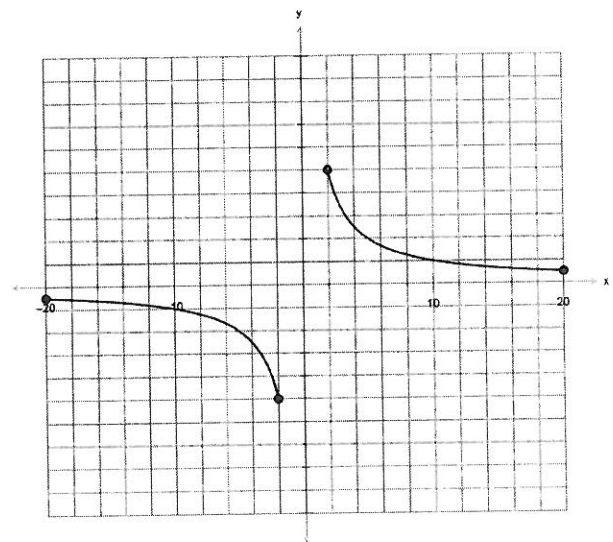
$$y = -2x + 4$$

c) Yes No (check one)

d) Yes No (check one)

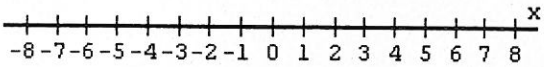
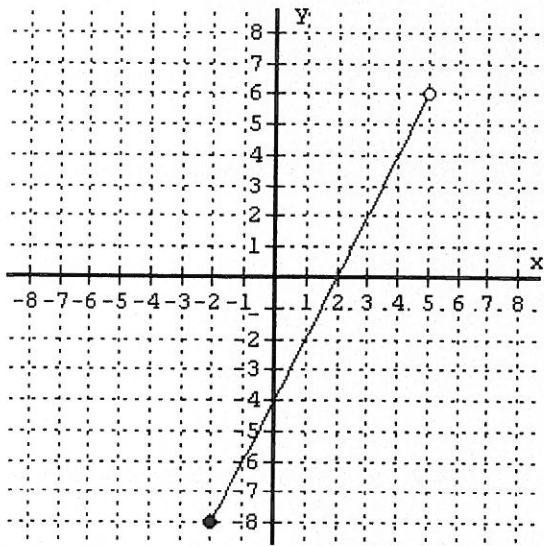


e) Yes No (check one)



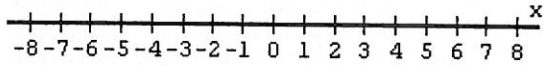
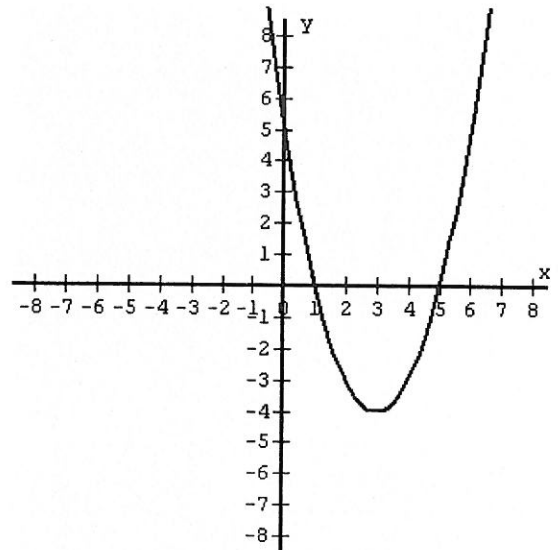
f) Yes No (check one)

Examine the Graph 1



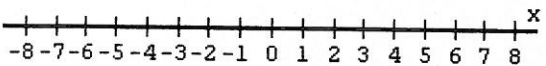
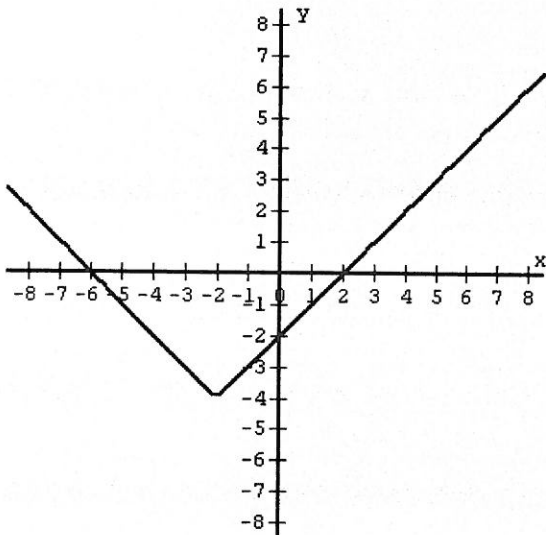
1) Where is $f(x) \geq 0$?

Interval Notation
 $[2, 5[$



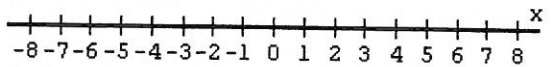
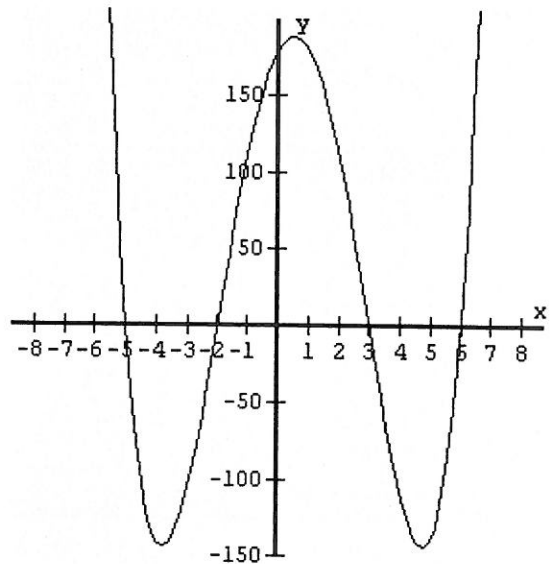
2) Where is $f(x) \leq 0$?

Interval Notation
 $[1, 5]$



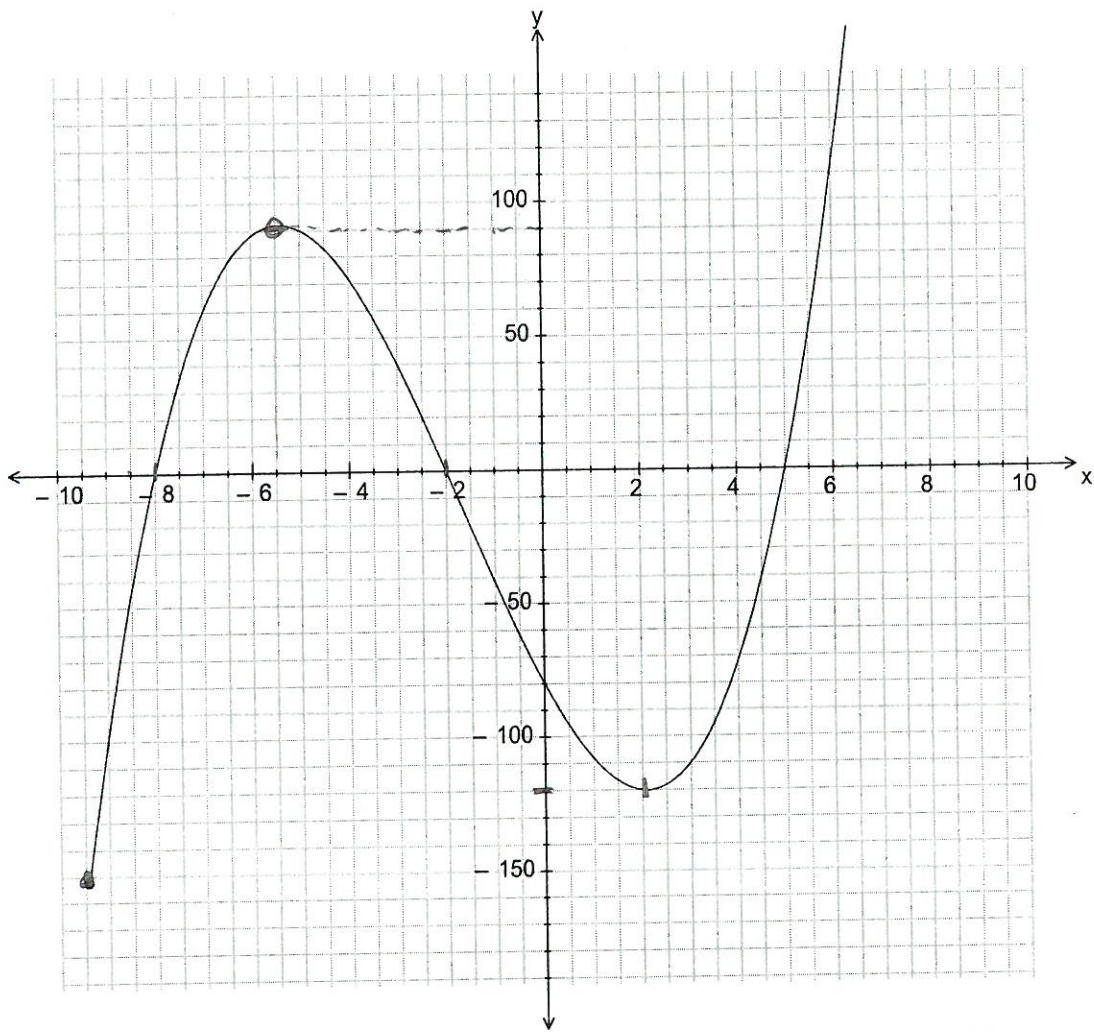
3) Where is $f(x) > 0$?

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

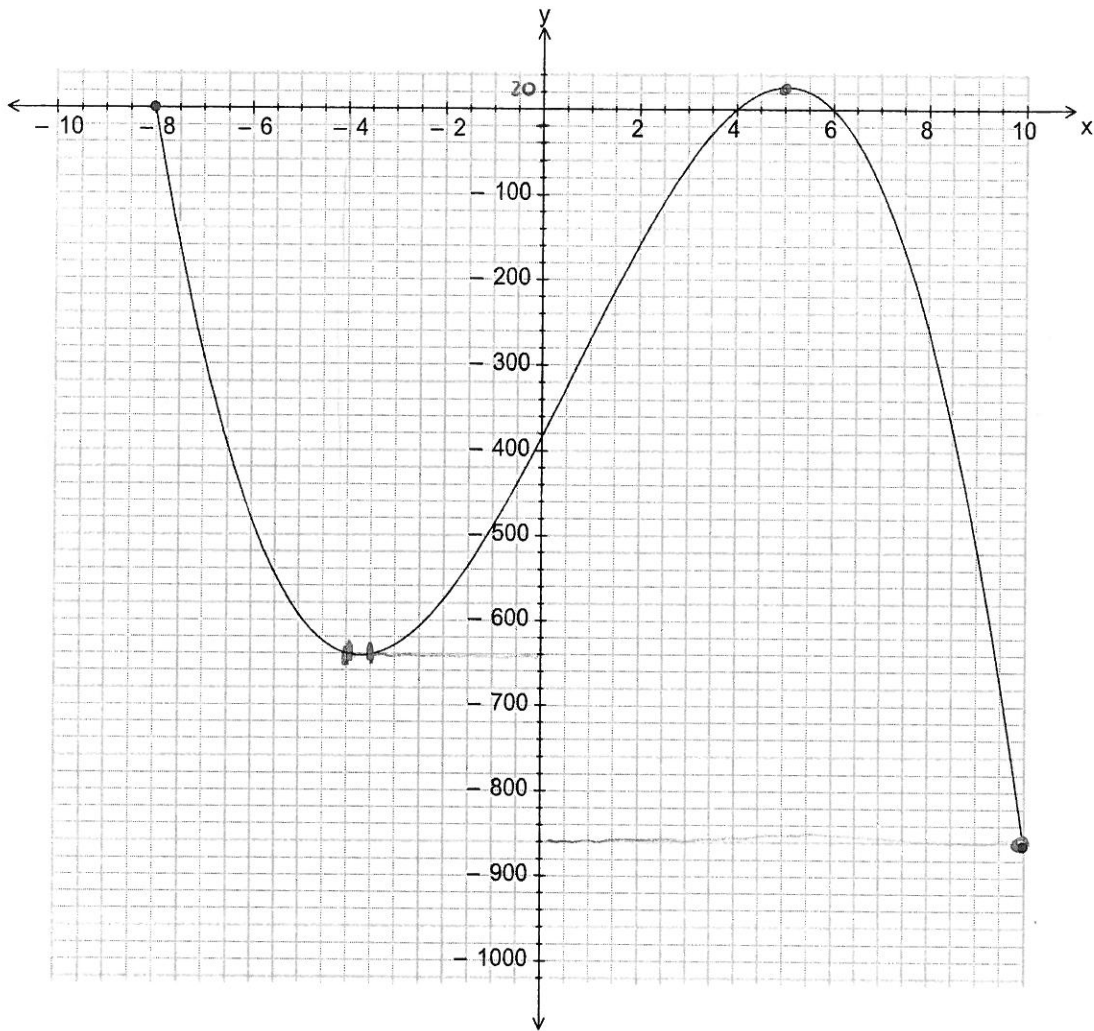


4) Where is $f(x) < 0$?

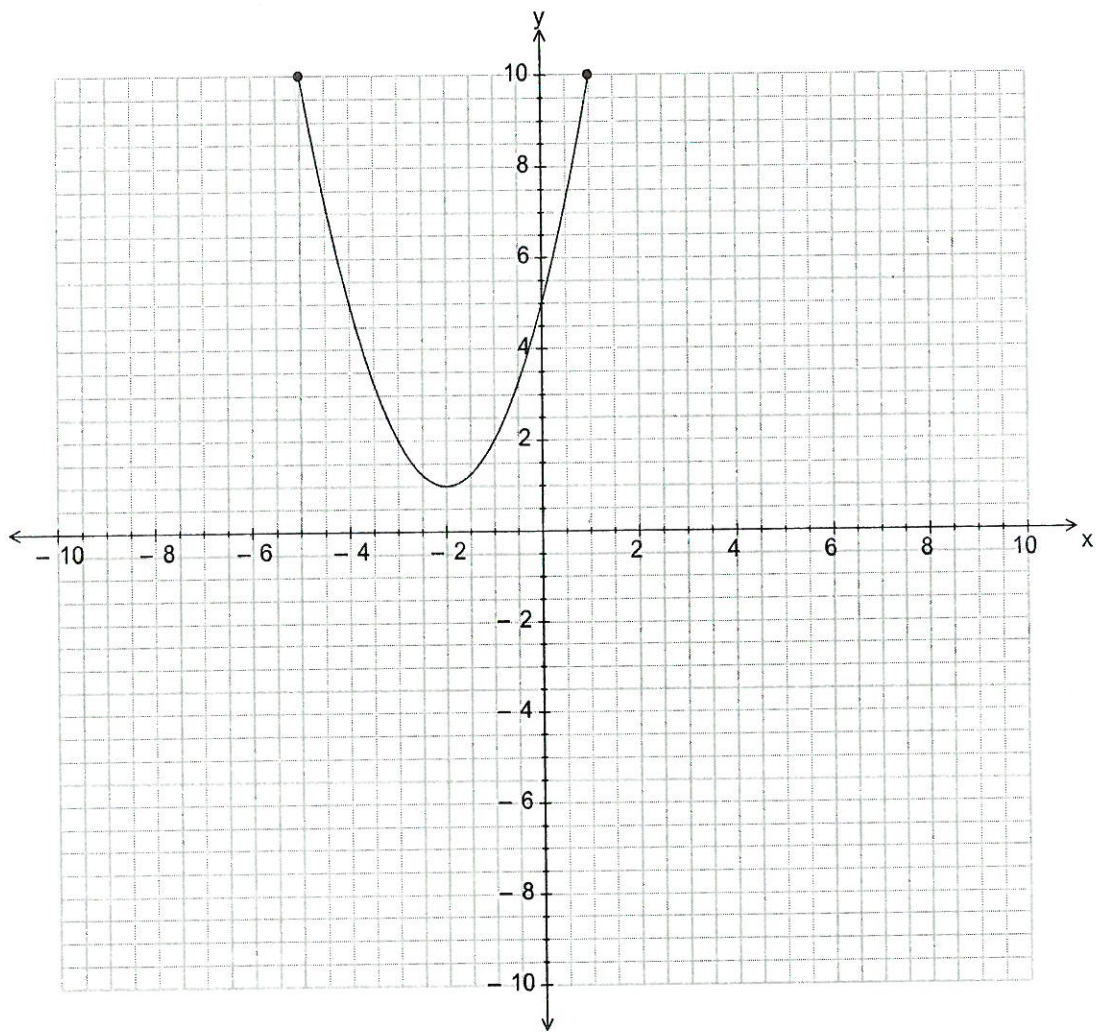
Interval Notation
 $] -5, -2[\cup] 3, 6 [$



Domain:	$[-9.5, \infty[$
Range:	$[-150, \infty[$
Zero(s) approx.	$\{-8, -2, 5\}$
Initial value	$\{-80\}$
Positive	$[-8, -2] \cup [5, \infty[$
Negative	$[-9.5, -8] \cup [-2, 5]$
Absolute Max	\emptyset
Relative Max	$\{90\}$
Absolute Min	$\{-150\}$
Relative Min	$\{-120\}$
Increasing	$[-9.5, -5.5] \cup [2, \infty[$
Decreasing	$[-5.5, 2]$



Domain:	$[-8, 10]$
Range:	$[-860, 20]$
Zero(s) approx.	$\{-8, 4, 6\}$
Initial value	$\{-380\}$
Positive	$[4, 6]$
Negative	$[-8, 4] \cup [6, 10]$
Absolute Max	$\{20\}$
Relative Max	\emptyset
Absolute Min	$\{-860\}$
Relative Min	$\{-640\}$
Increasing	$[-4, 5]$
Decreasing	$[-8, -4] \cup [5, 10]$



Domain:	$[-5, 1]$
Range:	$[1, 10]$
Zero(s) approx.	\emptyset
Initial value	$\{5\}$
Positive	$[-5, 1]$
Negative	\emptyset
Absolute Max	$\{10\}$
Relative Max	\emptyset
Absolute Min	$\{1\}$
Relative Min	\emptyset
Increasing	$[-2, 1]$
Decreasing	$[-5, -2]$