

Domain and Range Notes

T can determine whether a relation is a function and identify domain and range.

Vocabulary:

Domain: The set of all possible x-values
(input)
from left to right

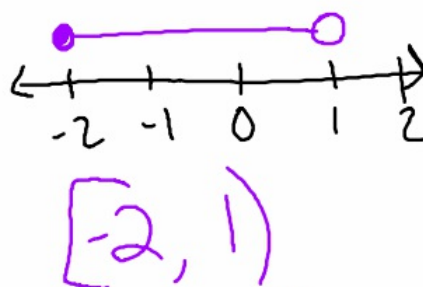
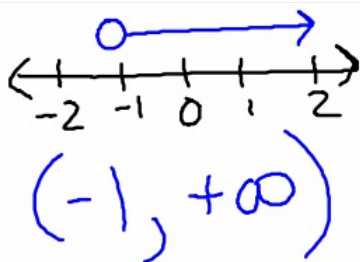
Range: The set of all possible y-values
(output)
from bottom to top

Function: A function has exactly one
value from the range for each value from
the domain.
↳ vertical line test

Interval Notation:

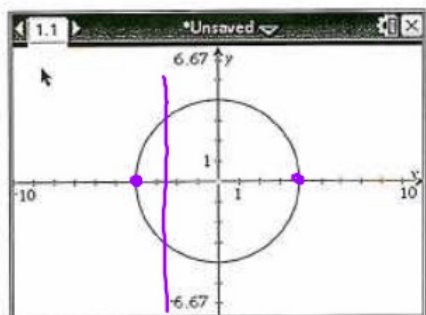
$(,)$ → open circle, arrow
the point is not on the graph

$[,]$ → closed circle
the point is on the line



For each problem:

1. State the domain *x-values*
2. State the range *y-values*
3. Determine if each graph represents a function *left to right*
bottom to top
ULT
4. Explain your reasoning using the words domain and range



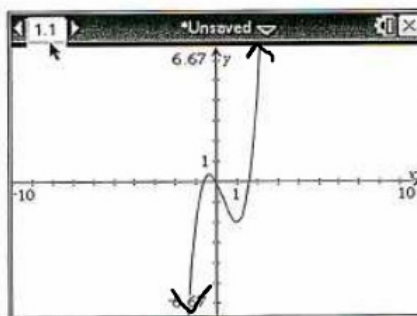
Domain:

Range:

Function:

Explanation:

$[-4, 4]$
 $[-4, 4]$
No
There are two values from the range corresponding to one value in the domain. In the range.



Domain:

Range:

Function:

Explanation:

$(-\infty, +\infty)$
 $(-\infty, +\infty)$
yes
Each value in the domain corresponds to exactly one value in the range.