Domain and Range

Domain and Range of a Relation or Function

- 1. The **domain** of a relation or function is the set of first components of the ordered pairs.
- 2. The **range** of a relation or function is the set of second components of the ordered pairs.

Note – if the domain is not stated, assume the domain to be the set of all those real numbers for which the function is defined, or makes sense (that is, when the values of the domain are substituted for the independent variable, they produce real numbers for the range, the dependent variable).

What is the domain and range of the function represented by:

{ (Sunday, S), (Monday, M), (Tuesday, T), (Wednesday, W), (Thursday, T), (Friday, F), (Saturday, S)}

Domain:

Range:

What is the domain and range of the function represented by $\{(0,0), (1,2), (2,4), (3,6)\}$?

Domain:

Range:

Which of the following relations (given as equations) represent functions?

What is the domain? Is it a function?

Determine some points, plot them, and use the vertical line test if desired.

$y^2 = x - 6$	y = 4x - 3	y = x - 1	$y = \frac{6}{x - 2}$
Domain: $[6,\infty)$	Domain:	Domain:	Domain:
- /			$(-\infty,2)\bigcup(2,\infty)$
If x is 15, then y ² must	Function?	If x is 4, y is 3. If x is -2, y	Since 2 would cause the
be 9. What value(s) of y		is 3. Can different x	denominator to be 0
result in 9? Can the		values map to the same	and division by 0 is
same x map to two		y value and it still be a	undefined, 2 must not
different y values and it		function?	be included in the
still be a function?			domain.