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## Pre-Calculus Terms



## Across

4. The test by which a relation is either shown to be a function or not. The graph of a function does not intersect with a vertical line more than once.
5. A function is periodic if and only if $f(x)=f(x+c)$, for all values $x$, where $c$ is a constant. A periodic function repeats itself at regular intervals.
6. A function $f$ is odd if $f(x)=-f(-x)$
7. The set of all inputs for which a function or relation is defined.
8. A line that a graph approaches but never crosses
9. The test by which it is shown whether a function is a one-to-one function or not, and therefore whether its inverse is a function.
10. The set of all possible ordered pairs ( $a, b$ ) composed of elements taken from the two sets, $A$ and $B$.

## Down

1. A function is one-to-one if each element in its range is paired with exactly one element from its domain.
2. A function is undefined at a given value of its independent variable if for that value, there is no output--this occurs when a particular input creates a situation in which there is division by zero, or an even root of a negative number, for example.
3. A function is piecewise if and only if it uses different rules for different parts of its domain
4. A function $f$ is even if $f(x)=f(-x)$
5. when $\mathrm{a}<1$ and the graph is stretched along the x-axis
6. A relation which assigns a correspondence from the elements of the range to those of the domain. The inverse of a function or relation can be found by interchanging the variables in the function or relation.
7. A function is defined at a given value of the independent variable if it assigns that input an output; defined means "takes on a value".
