$\qquad$

## Across

1 A formula useful for finding powers and roots of complex numbers is known as $\qquad$ 's Theorem.

5 A function made up of a finite number of continuous pieces is described as $\qquad$ defined.

8 To find each successive term in an arithmetic sequence, add the common $\qquad$ .

16 A method of mathematical proof typically used to establish that a given statement is true of all natural numbers.

17 A line that approaches a given curve arbitrarily closely.
18 A function with a connected graph possesses $\qquad$ _.

20 A technique for determining the number of positive or negative roots of a polynomial is known as $\qquad$ ' Rule of Signs.

21 A function whose graph moves downward as it is followed from left to right.

23 A graph such that every $x$ in the domain is mapped to exactly on $y$-value.
Across Continued
24 A method of solving a quadratic equation. (3 words)
27 A shorthand method of polynomial division is known as $\qquad$ division.

30 A part of a graph which looks like all or part of an upside-down bowl is described as $\qquad$ downward.

31 The lowest point in a particular section of a graph is referred to as a relative $\qquad$ _.

34 The $x$-values that can be used in a function.
35 A polar curve that is somewhat heart shaped.
36 A set of basic functions used as building blocks for more complicated functions are referred to as $\qquad$ functions.

37 The function $y=x$.
38 The function obtained by switching the $x$ - and $y$-variables in a function.
39 The line used to term the locus of points for a parabola.
$403+4 i$ and $3-4 i$ are referred to as $\qquad$ terms.

## Down

2 The highest point in a particular section of a graph is referred to as a relative $\qquad$ .

3 A root that appears in an equation during the process of solving another equation which is not a solution of the equation to be solved.

4 For function $f, f(-x)=-f(x)$.
6 The Greek letter used to indicate "sum".
$7 f(g(x))$ where $f$ and $g$ are functions.
9 A parabola is the locus of points such that the distance to the $\qquad$ equals the distance to the directrix.
10 To find each successive term in a geometric sequence, multiply by the common $\qquad$ .
11 In an ellipse, this number is between 0 and 1 , in a parabola it is 1 and in a circle it is 0 .
12 A sequence such as $3,6,9,12,15, \ldots$
13 A function whose graph moves upward as it is followed from left to right.
$14 y$-values that are used by a function.
15 The number associated with a square matrix.
19 For function $f, f(-x)=f(x)$.
20 The name given to $\frac{f(x+h)-f(x)}{h}$. (2 words)
22 The location where an equation crosses the $x$-axis.
25 The sum of a finite number of terms of a sequence. (2 words)
26 A number such as $5+7 i$.
27 A list of numbers set apart by commas, such as $2,4,6,8,10, \ldots$
28 A method for solving a linear system of equations using determinants is called $\qquad$ 's Rule.

29 The sequence $1,1,2,3,5,8,13$, $\ldots$.
32 Coordinates of the form ( $r$, theta).
33 A sequence such as $4,8,16,32,64, \ldots$

