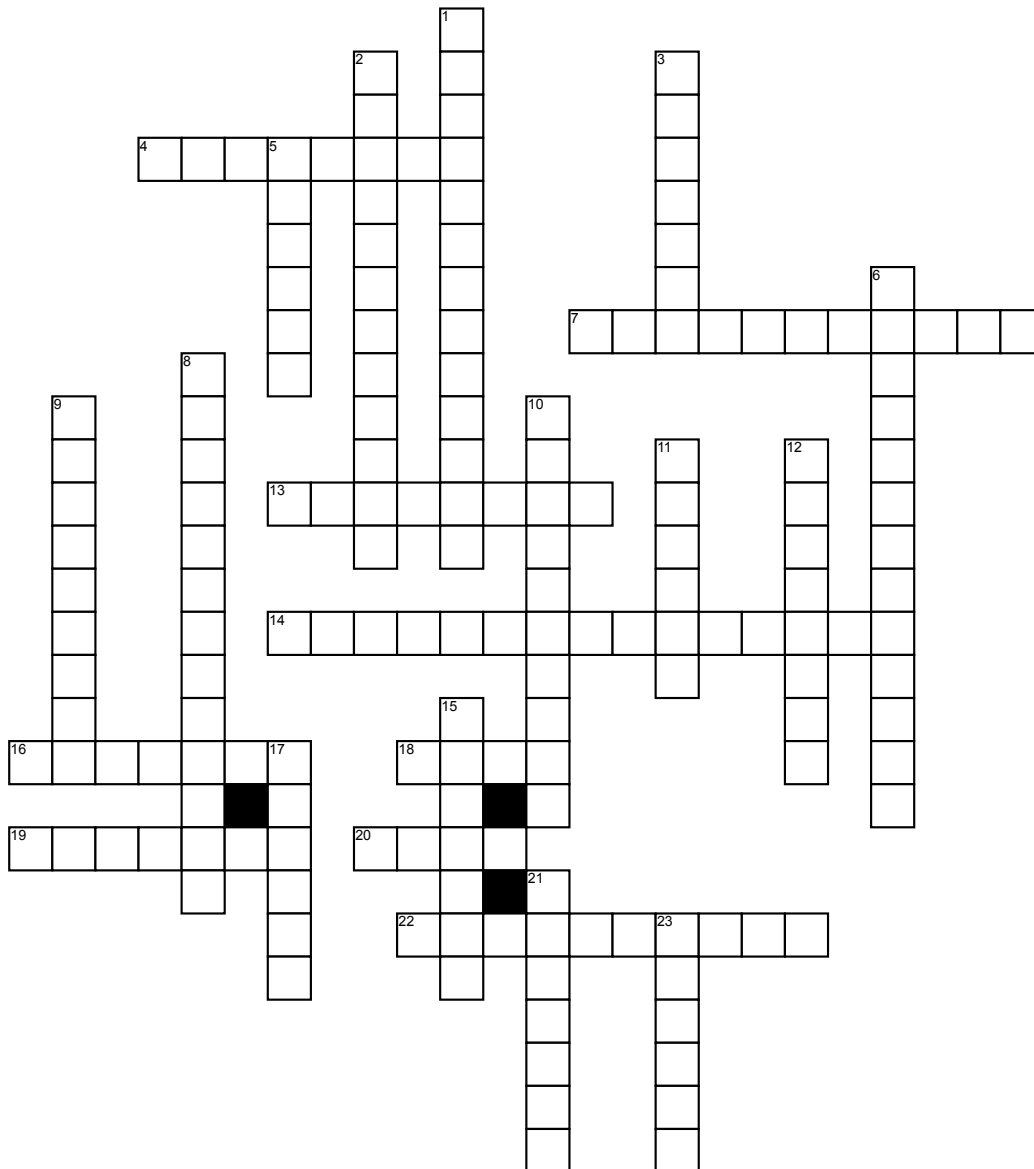


Pre-Calculus Math Puzzle



Across

4. An algebraic expression of the sum or the difference of two terms.
7. A numerical or constant quantity placed before and multiplying the variable in an algebraic expression
13. Corner or a point where lines meet.
14. A complex number that can be written as a real number multiplied by the imaginary unit i , which is defined by its property $i^2 = -1$.
16. The value of a function at a certain point in its domain, which is greater than or equal to the values at all other points in the immediate vicinity of the point.
18. Where a function equals zero.
19. In a right angled triangle, it is The length of the opposite side divided by the length of the adjacent side.
20. It is the ratio of the length of the side that is opposite that angle to the length of the longest side of the triangle.
22. In mathematics, a multiplicative inverse for a number x , denoted by $1/x$ or x^{-1} , is a number which when multiplied by x yields the multiplicative identity, 1.

Down

1. It is the set of all real numbers where the expression is defined. Start off with all real numbers. Exclude any values of the independent variable which cause division by zero. Exclude any values of the independent variable which result in taking the square root of a negative number.
2. The branch of mathematics dealing with the relations of the sides and angles of triangles and with the relevant functions of any angles.
3. Describes an inward curve; its opposite, convex, describes a curve that bulges outward.
5. The starting point. On a number line it is 0. On a two-dimensional graph it is where the X axis and Y axis cross, marked (0, 0).
6. The distance around the circle. It is the circle's perimeter.
8. A number that can be expressed in the form $a + bi$, where a and b are real numbers, and i is the imaginary unit (which satisfies the equation $i^2 = -1$).
9. A conic section that can be thought of as an inside-out ellipse. The locus of points such that the difference between the distances to each focus is constant.
10. It is like an equation that uses symbols for "less than" (<) and "greater than" (>) where an equation uses a symbol for "is equal to" (=).
11. In a right triangle, it is an angle is the length of the adjacent side divided by the length of the hypotenuse.
12. A u-shaped curve with certain specific properties. The locus of points such that the distance to the focus equals the distance to the directrix.
15. A function f defined on some set X with real or complex values, there exists a real number M such that. For all x in X .
17. A rectangular array of numbers or other mathematical objects for which operations such as addition and multiplication are defined
21. The place where the graph has a vertex at its lowest point.
23. An arc of a circle equal to one eighth of its circumference, or the area enclosed by such an arc with two radii of the circle.