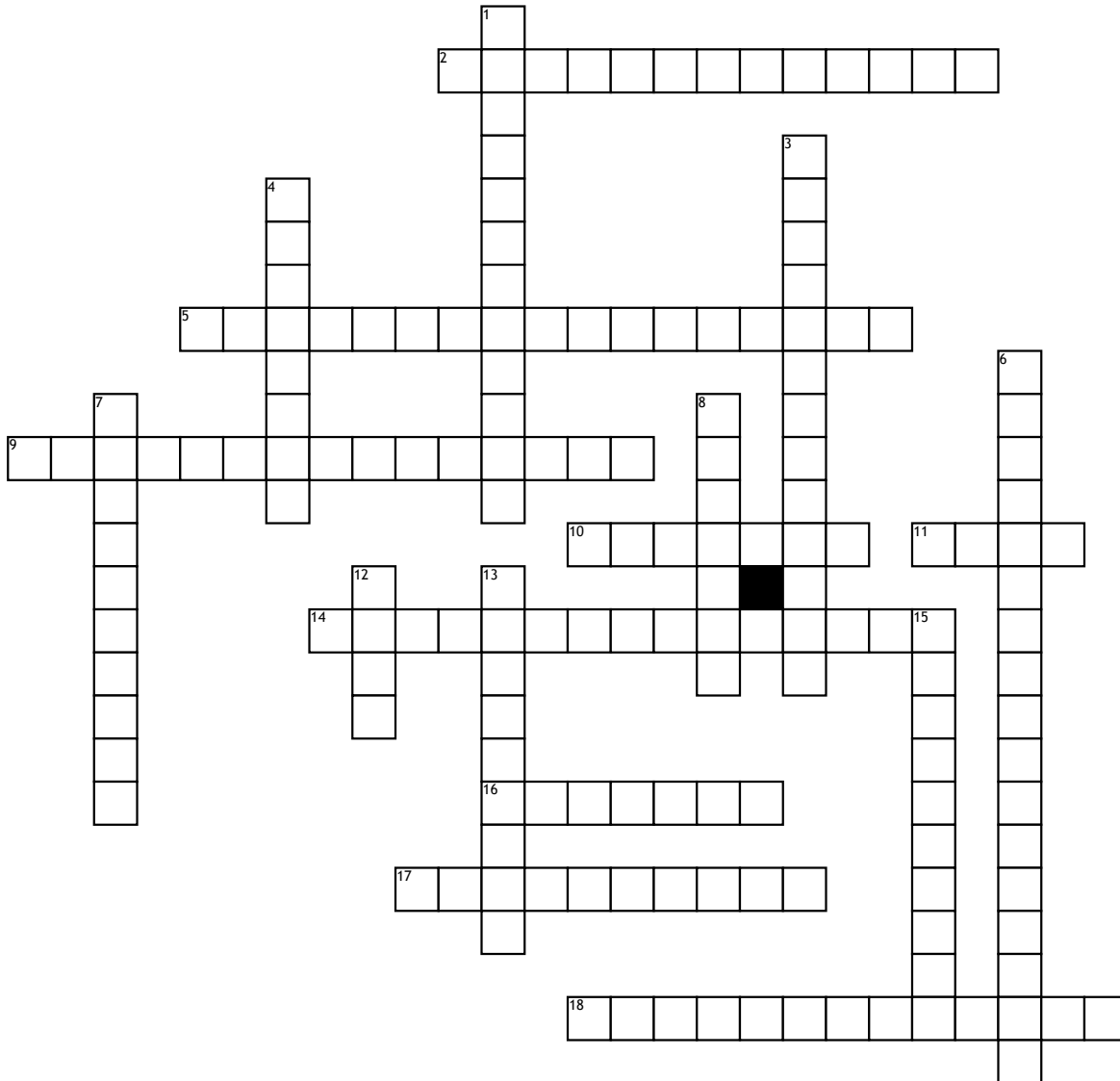Name: _____ Date: _____

quadratics

Across

2. A complex number is a number of the form a + bi, where a and b are real numbers and i is the imaginary unit, satisfying i2 =

5. Quadratic function is a function that can be described by an equation of the form f(x) = ax2 + bx + c, where a ≠ 0. In a quadratic function, the greatest power of the variable is 2. The graph of a quadratic function is a parabola.

9. When the Discriminant (b2–4ac) is: positive, there are 2 real solutions. zero, there is one real solution. negative, there are 2 complex solutions.

10. in mathematical analysis, the maxima and minima (the respective plurals of maximum and minimum) of a function, known collectively as extrema (the plural of extremum), are the largest and smallest value of the function, either within a given range (the local or relative extrema) or on the entire domain of a function (...

11. In mathematics, a zero, also sometimes called a root, of a real-, complex- or generally vector-valued function

14. The discriminant of an equation gives an idea of the number of roots and the nature of roots of the equation. In other words, it "discriminates" between the possible solutions. The discriminant is the expression found under the square root part of the quadratic formula (that is, ... If , there is one real solution.

16. relating to or affecting the fundamental nature of something; far-reaching or thorough.

17. Take a closer look, and you'll see that the y-axis is also the line "x = 0". In the same way, the x-axis is also the line "y = 0". Then, algebraically, an x-intercept is a point on the graph where y is zero, and. a y-intercept is a point on the graph where x is zero.

18. The slope-intercept form is simply the way of writing the equation of a line so that the slope (steepness) and y-intercept (where the line crosses the vertical y-axis) are immediately apparent. Often, this form is called y = mx + b form.

Down

1. a numerical or constant quantity placed before and multiplying the variable in an algebraic expression (e.g., 4 in 4x y).

3. The imaginary unit is denoted and commonly referred to as "i." Although there are two possible square roots of any number, the square roots of a negative number cannot be distinguished until one of the two is defined as the imaginary unit, at which point and can then be distinguished.

4. a symmetrical open plane curve formed by the intersection of a cone with a plane parallel to its side. The path of a projectile under the influence of gravity ideally follows a curve of this shape.

6. While factoring may not always be successful, the Quadratic Formula can always find the solution. The Quadratic Formula uses the "a", "b", and "c" from "ax2 + bx + c", where "a", "b", and "c" are just numbers; they are the "numerical coefficients" of the quadratic equation they've given you

7. In algebra, a conjugate is a binomial formed by negating the second term of a binomial. The conjugate of x + y is x – y, where x and y are real numbers. If y is imaginary, the process is termed complex conjugation: the complex conjugate of a + bi is a – bi, where a and b are real.

8. as great, high, or intense as possible or permitted

12. A technique for distributing two binomials. The letters FOIL stand for First, Outer, Inner, Last. First means multiply the terms which occur first in each binomial. Then Outer means multiply the outermost terms in the product.

13. another term for factorize.

15. a number that produces a specified quantity when multiplied by itself.