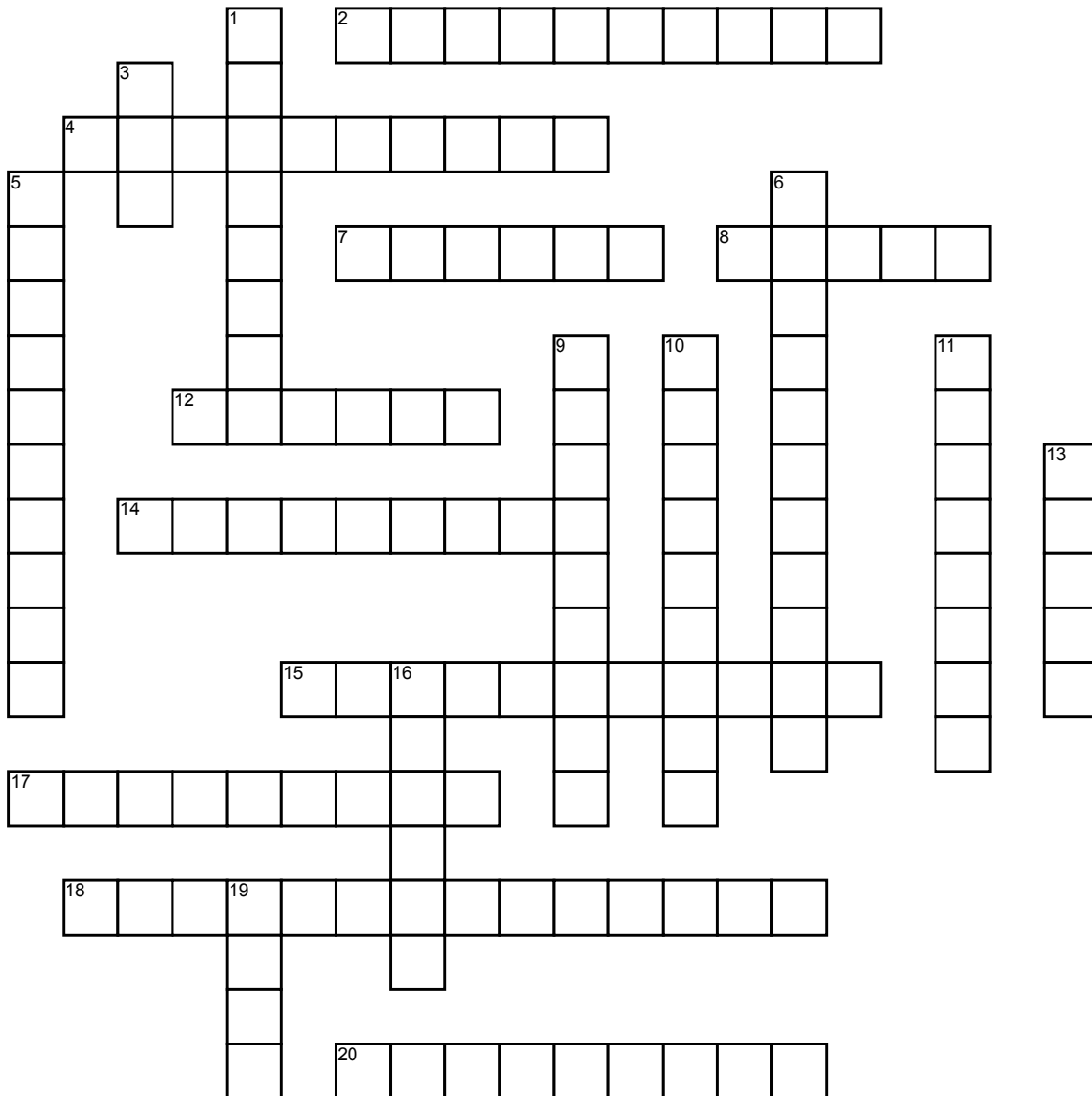


Name: _____

vector puzzles



Across

2. two lines have the same direction and same location
 4. A vector of dimension n is an ordered collection of n elements, which are called _____
 7. the _____ to the graph of F at point P is the line that is perpendicular to the tangent at P
 8. something that either pushes or pulls an object
 12. quantity have magnitude and direction
 14. Vector has _____ and direction
 15. The _____ law, which states that the sum of three vectors does not depend on which pair of vectors is added first: $(a+b)+c=a+(b+c)$.

17. two vectors are parallel or lie on the same straight line
 18. the single force that can be used to represent the combined effect of all the forces
 20. _____ equation of a line, also called a scalar equation of a line
Down
 1. Two vectors that are _____ have the same magnitude but point in opposite directions
 3. _____ product is also named as scalar product
 5. A set of values that show an exact position.
 6. The _____ law, which states the order of addition doesn't matter: $a+b=b+a$.

9. The _____ of a mathematical space (or object) is informally defined as the minimum number of coordinates needed to specify any point within it.
 10. In either vector or parametric form, t is called a _____
 11. There is no intersects between two lines.
 13. Two vectors are _____ if their corresponding components are equal.
 16. quantity have magnitude
 19. A vector with magnitude 1 is called a _____ vector