Lecture 1 - Introduction to Vectors
Worksheet 1

In the space to the left, write the answer that best completes each statement.

1) _____ A(n) <?> quantity is completely described by its magnitude.
2) _____ A(n) <?> quantity has both magnitude and direction.
3) _____ Velocity and force are examples of <?> quantities.
4) _____ The sum of two vector quantities is determined by their <?> and magnitude.
5) _____ The length of an arrow-tipped line segment drawn to represent a vector is proportional to the <?> of the vector.
6) _____ Vectors can be added by placing the <?> of one vector at the head of another vector.
7) _____ When vectors are added, the <?> is drawn from the tail of the first vector to the head of the second vector.
8) _____ A person takes a walk around a city. The vector drawn from the starting position to the ending position represents a(n) <?>. Hint: A variable.
9) _____ Speed represents the magnitude of <?>.
10) _____ Force, like displacement and velocity, is a <?> quantity.
11) _____ A <?> quantity can be represented by a arrow-tipped line segment.
12) _____ Vectors can be <?> by placing the tail of one vector at the head of the other vector.
13) _____ When adding two vectors, neither the length nor the <?> of either vector is changed.
14) _____ The sum of two vectors, or the <?>, is found by drawing a third vector from the tail of the first to the head of the second.
15) _____ If two vectors act in the same or in <?> directions, their vector sum can be found algebraically.
16) _____ Four vectors with magnitude equal to one are added, one pointing east, one west, one south, and one north. What is the magnitude of the resultant vector?
17) _____ The vectors having magnitudes of 5 and 8 cannot have a resultant greater than <?>.
18) _____ The vectors having magnitudes of 5 and 8 cannot have a resultant less than <?>.
18) _____ Vector A is added to vector B to get the resultant vector. How would the resultant be changed if vector B was added to vector A?

Match up any two vectors on the drawing below that are equal and list them below.

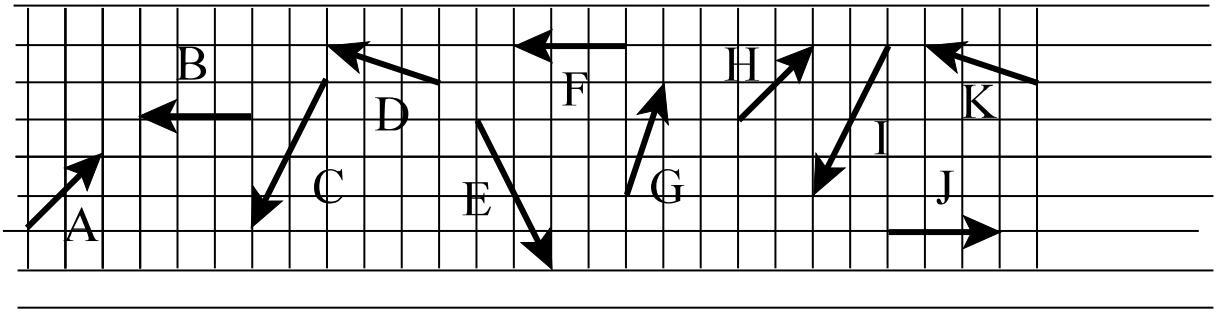
_____

_____

_____

_____

Why are J and B considered to be different vectors?



Identify the following quantities as a scalar (S) or a vector (V).

_____ speed _____ volume

_____ "pick-up" _____ displacement

_____ time _____ force

_____ 8 m/s _____ 22 m South

A person walks 11 m and then 15 m. Find the maximum and minimum values for the resultant vector displacement.

_____ minimum

_____ maximum