

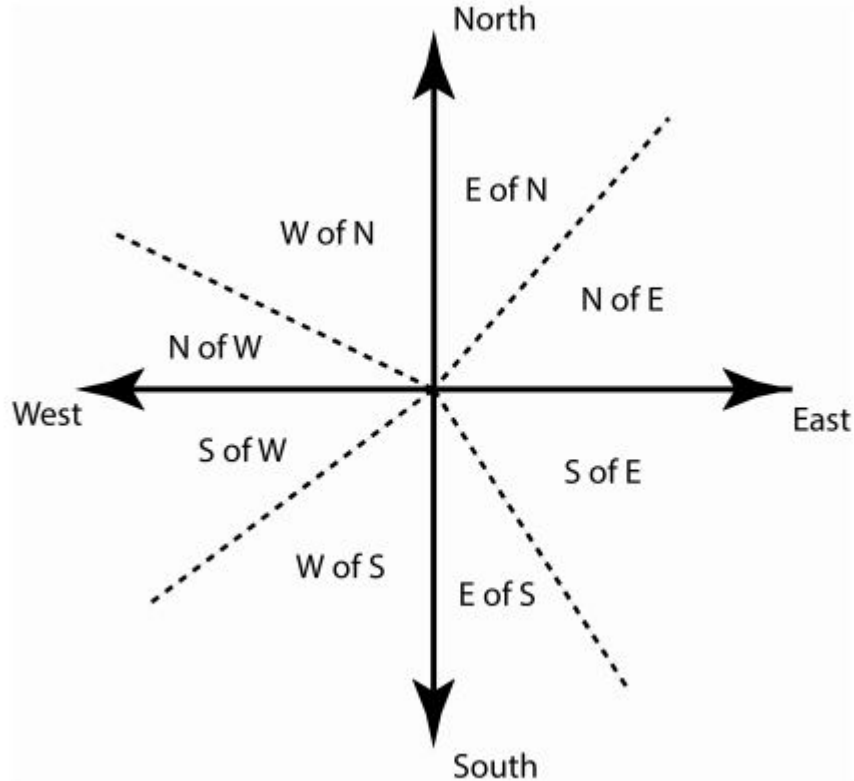
Guided Notes - Vectors

Representing Vectors

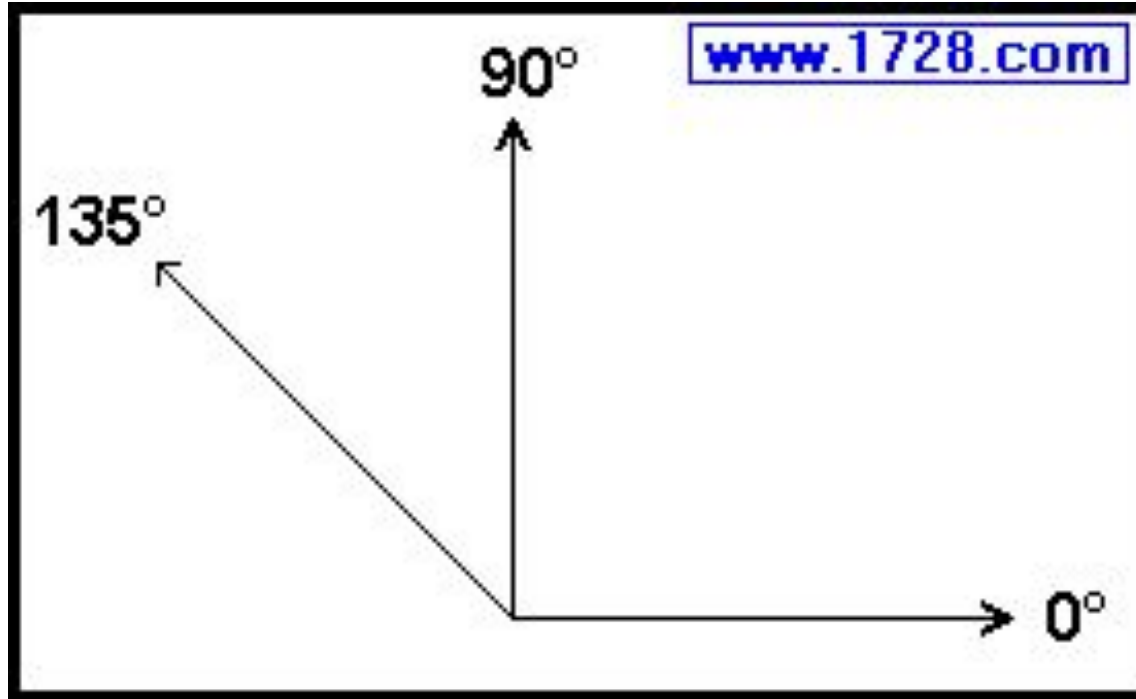
Vectors on paper are simply arrows that show:

- DIRECTION represented by the **direction the vector points**
- MAGNITUDE represented by the **length of the vector**
 - Examples of vectors: **displacement, velocity, acceleration, force, momentum, etc.**

Angular Systems (Compass Point System)



Angular Systems (Reference Vector Systems)



Things we can DO with vectors

- Add/Subtract with a vector to produce **a vector**
- Multiply/Divide by a vector to produce either a **vector** or **scalar**

Vector “Pieces”

- Vectors can be broken into **components**
- X-Y system of components
 - **X - horizontal**
 - **Y - vertical**
 - Example
 - $V = 5.0 \text{ m/s}$ at 30 degrees

- Vectors can be added together by using their COMPONENTS
- Results are used to find:
 - Resultant magnitude
 - Resultant direction