

Lesson 7.5: Vectors and Applications

- 1) We measure some quantities using only **magnitude** (magnitude is the size, amount, or number value associated with something). For example, _____ and _____ are described using only magnitude.
- 2) However, to measure other quantities, we need a **vector**. Vectors have two components: magnitude AND _____.
- 3) _____, _____, and _____ are three quantities that are measured using vectors.
- 4) Vectors are **equivalent** if they have the same _____ and _____.
 - a. To determine if two vectors have the same length, or magnitude, we use the familiar _____.
 - b. Two vectors have the same direction if they are on lines with the same _____.
- 5) The **sum** of two vectors is called the _____ of the two vectors.
- 6) Given a vector **w** and two other vectors **u** and **v** whose sum is **w**, the vectors **u** and **v** are called _____ of **w**.
- 7) Describe the concept of a vector as though you were explaining it to a classmate. Use the concept of an arrow shot from a bow in the explanation.

- 8) Explain why vectors \overrightarrow{QR} and \overrightarrow{RQ} are not equivalent.