

# Monday Reading Assessment: Unit 0, and vectors

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## 1 Chapter 1 - Units and Measurement

1. In your own words, what is a physics theory, and what determines the validity of a theory?
2. Which of the following is not correct?
  - A: The quantity meters per second<sup>2</sup> is a unit of acceleration.
  - B: A kilometer is a unit of speed.
  - C: A kilometer per hour is a unit of speed.
  - D: The quantity kg per meter<sup>3</sup> is a unit of density.

## 2 Chapter 2 - Vectors

1. Which of the following is should be considered a vector quantity (i.e. having a magnitude and direction)?
  - A: wind velocity
  - B: air temperature
  - C: the mass of an object
  - D: the brightness of a light source
2. Explain in your own words (or draw a diagram): why can't a vector have a component greater than its own magnitude?