

Assessment Module 4 Vectors

Test your knowledge of Vectors:

1. Which of the following quantities is not a scalar?
- Length
 - Force
 - Volume
 - Mass

Answer: b A force has both size and direction so it is a vector. It is important not only to know how big a force is but also to know which direction the force is being applied.

Incorrect: a Length has no direction so it is a scalar. Try again.

Incorrect: c Volume is how much space an object fills. This is a quantity that has no direction so it is a scalar. Try again.

Incorrect: d Mass is how much matter in an object. This is a quantity that has no direction so it is a scalar. Try again.

2. A vector is a measurement that has both size and _____?
- Strength
 - Magnitude
 - Direction

Answer: c This is the correct definition of a vector.

Incorrect: a Strength is another way of saying size. A vector has something else. Try again.

Incorrect: b Magnitude is another way of saying size. A vector has something else. Try again.

3. If a force of 10 N is pushing an object to the right, and another force of 5 N is pushing to the left, what direction will the object move?
- Left
 - Right
 - Up
 - Down

Answer: b When adding vectors in different directions, take the difference between the two vectors and keep the direction of the larger force vector.

Incorrect: a This is incorrect. The smaller vector is pointing to the left so the resultant would not have the same direction as the smaller vector.

Incorrect: c This is incorrect. Neither of the original vectors was pointing up so the resultant would not point up.

Incorrect: d This is incorrect. Neither of the original vectors was pointing down so the resultant would not point down.

4. What is the resultant force from the previous problem?
- 15 N, to the right

