

# Reinforcement Determining Position

**Directions:** Circle the word or phrase that correctly completes each sentence below.

1. The (positive/origin) direction is often used to denote distance in the reference direction.
2. The direction from a reference point to an object is the (negative/reference) direction.
3. Another word sometimes used for reference point is (origin/location).
4. A starting point used to describe the position of an object is the (vertex/reference point).
5. A (vector/scalar) is a quantity that must be described with both a size and a direction.
6. An object's total distance from its starting point is its (displacement/distance traveled).
7. (Distance/Location) is a measurement of the space between two points or objects.
8. Denoted by a minus (–) sign, a (negative/positive) distance is often used to represent an object's distance away from the reference point.

**Directions:** Answer each question below in the space provided.

9. Draw a graph with an  $x$ -axis and  $y$ -axis below. On the graph, divide each axis into 1-cm intervals. Label each axis and each 1-cm mark. Then, draw a representation of a 4-cm-long vector that points in the positive  $y$ -direction.

10. If you go for a long bike ride through your neighborhood, around your school, and to the skate park to meet a friend, which is likely to be greater, your total distance traveled or your displacement? Explain your answer.

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