

## CHAPTER OVERVIEW

### 4: Describing Motion in Multiple Dimensions

#### Learning Objectives

- Describe motion in a 2D plane.
- Describe motion in 3D space.
- Describe motion along the circumference of a circle.

In this chapter, we will learn how to extend our description of an object's motion to two and three dimensions by using vectors. We will also consider the specific case of an object moving along the circumference of a circle.

#### prelude

Jake and Madi are riding a carousel that spins at a constant rate. Madi is closer to the center of the carousel than Jake is. What can you say about their accelerations?

- A. Both of their accelerations are zero.
- B. Madi's acceleration is greater than Jake's.
- C. Jake's acceleration is greater than Madi's.
- D. Madi and Jake have the same non-zero acceleration.

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