Use this worksheet for the first two activities of the Rotate Family lesson.

## Warm-Up

What did you notice about moving the basketballs? What did you wonder?

Which player made it easiest to score? Which made it hardest? Why?

## Introduction

In the boxes below, describe the relative speed and direction of the variables. Then draw your traces. Include *C*, *θ, x,* and *RC,θ*(*x*) in your drawings.

|  |  |  |
| --- | --- | --- |
| **Page 1 (180°)** | **Page 2 (90°)** | **Page 3 (45°)** |
| Speed & direction | Speed & direction | Speed & direction |
| Traces | Traces | Traces |

On page 3, could you find a fixed point? Describe your result.

As you did this activity, what did you notice? What did you wonder?

If you set *θ* = 270° and drag *x* downward, what direction will *RC,θ*(*x*) move? How did you figure this out?