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** | **Page 2** | **Page 3** |
| Speed & direction | Speed & direction | Speed & direction |
| Traces | Traces | Traces |

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

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

## Rotate Games

On the back of this paper record your group’s high scores on each game your teacher assigns.