

# Thinking About ~~cheating at~~ Tricky Pattern Blocks in Turtle Art

## Goal

Write a Turtle Art procedure to draw each of the shapes in a set of pattern blocks! In other words, teach the turtle to draw all of the shapes in a set of pattern blocks.

## Suggested Strategies

Think about the shape you want the turtle to draw

*How many sides are there? Is there a mirror image?*

Look for patterns

*Are any of the turns/corners ones you have seen before?*

*Are all of the sides equal? Are some longer than others? If so, by how much?*

Try numbers you know

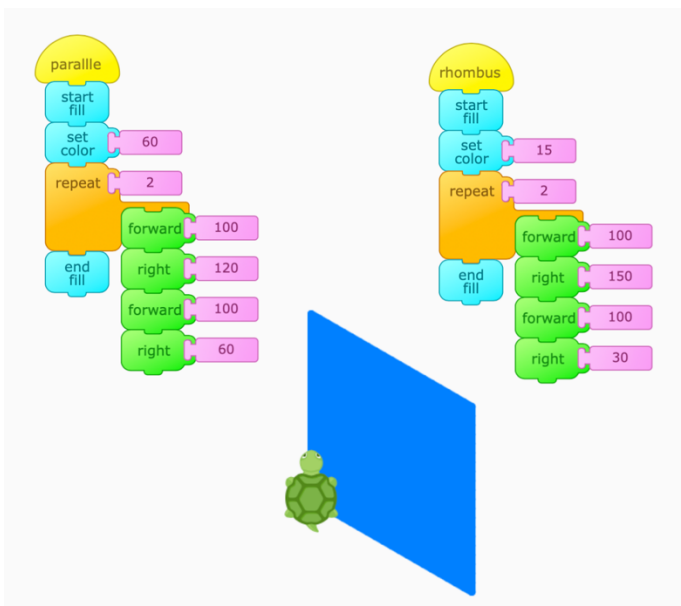
Start with simple numbers for right or left turns. Numbers ending in 0 or 5 often do the trick (those are multiples of 5 or 10). For example, 90, 120, 30, 150, 60, 45 are some of the numbers we have used to turn the turtle.

Hide the turtle to see if the shape is drawn perfectly

*You should not see overlapping lines or gaps in the shape.*

I really like when the turtle returns to where it started drawing a shape and pointed in its original direction. That's why I use FORWARD RIGHT or FORWARD LEFT instead of RIGHT FORWARD or LEFT FORWARD.

Here are two of the shapes we figured out together. Do you see any patterns?



## Challenge

Figure out a way to use the shapes you created to make patterns on the computer screen with your new procedures. You might even think of this as creating art software for little kids to play with.