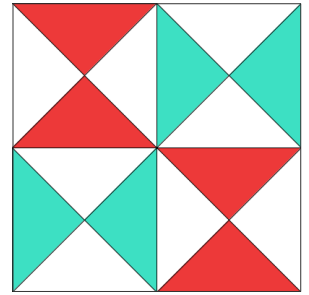


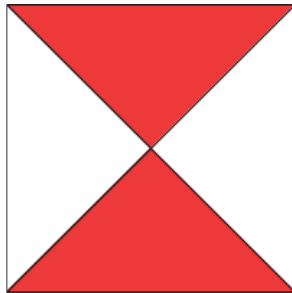
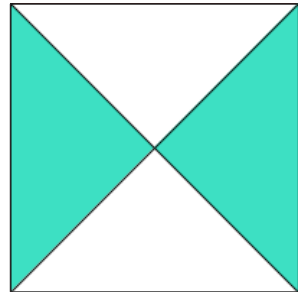
Name: \_\_\_\_\_

## Lab 5 Worksheet

### Exercise 1

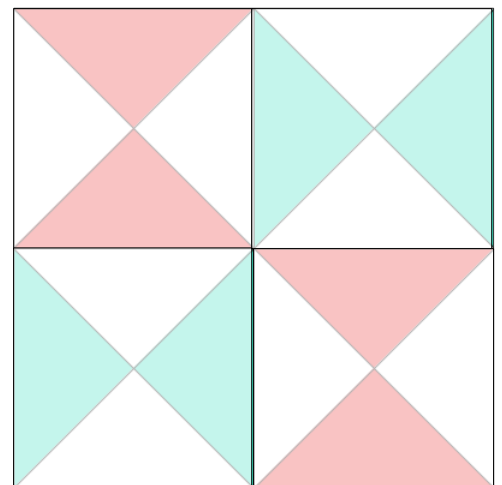
There are two repeated blocks in the hourglass quilt shown in the exercise. Answer the function definition questions for each, filling in the table below. Leave any extra rows blank.



what is being drawn?	what differs from one copy to the next?	how is it drawn?
upright hourglass		
sideways hourglass		

What are the specific values for the “what differs” things?

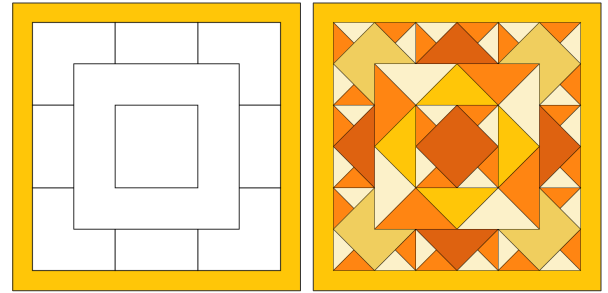
Each white box shown to the right represents the pattern drawn by one use of the upright or sideways hourglass functions. Label the picture with the specific values for each function call as well as which function (upright or sideways) is used to draw the pattern in each box. The drawing window is 400x400.



## Exercise 2

This complex quilt design is actually built by repeating a single block pattern. The 10 overlapping white squares in the adjacent illustration show how the individual blocks make up the quilt design.

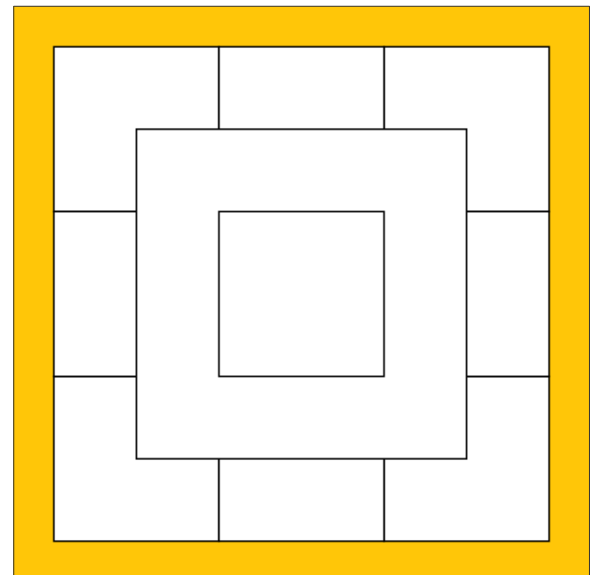
Answer the function definition questions for a function to draw one block, filling in the table below. Leave any extra rows blank.



what is being drawn?	what differs from one copy to the next?	how is it drawn?
quilt block		(you don't need to draw the grid lines – they are just to help you figure out coordinates)

What are the specific values for the “what differs” things?

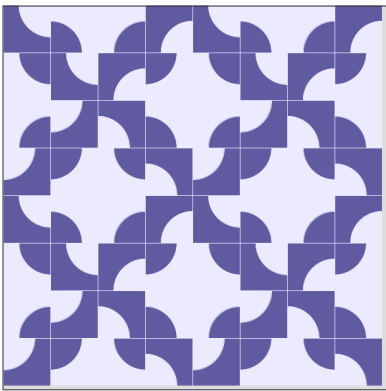
Each white box shown to the right represents the pattern drawn by one use of the quilt block function. Label the picture with the specific values to use for each function call. The drawing window is 700x700.

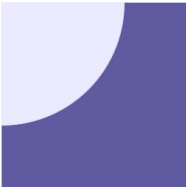

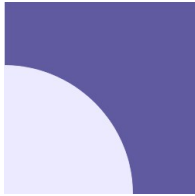
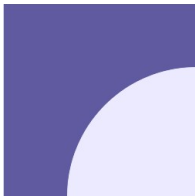


Exercise 3a

The complex-looking Drunkard’s Path quilt pattern shown is made up of just four basic building blocks. (Well, four basic building blocks with two color variations – one has the colors swapped compared to the other.)

Answer the function definition questions for each of the building block drawing functions, filling in the table below. Keep in mind the two color variations for each building block! Leave any extra rows blank.

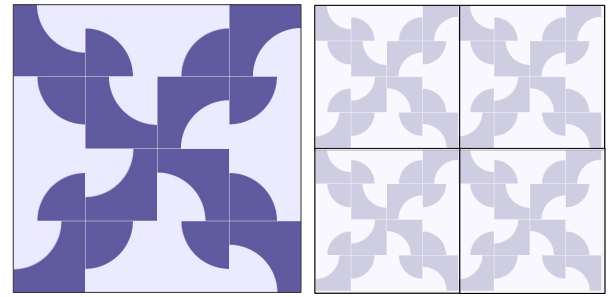


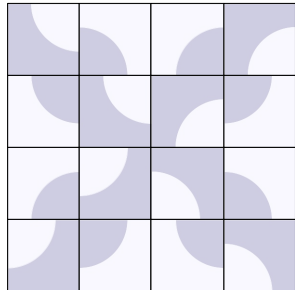
what is being drawn?	what differs from one copy to the next?	how is it drawn?
arc upper left		
arc upper right	(what differs is the same for each building block – you don’t need to write it again)	
arc lower left		
arc lower right		

## Exercise 3b

It's still too complicated to build the whole quilt directly from the building blocks in #3a – instead, the quilt is built from a 2x2 grid of quilt blocks (far right) and each quilt block (immediate right) is built from the building blocks from #3a.

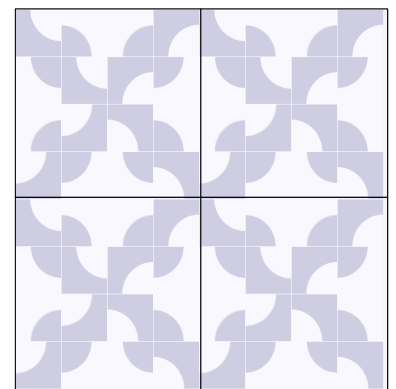
Answer the function definition questions for a function to draw a quilt block, filling in the table below. Leave any extra rows blank.



what is being drawn?	what differs from one copy to the next?	how is it drawn?
drunkard's path quilt block		<p>(each white box represents the pattern drawn by one use of a building block function from #3a – label the picture with the specific values for each function call as well as which building block function is used)</p> 

What are the specific values for the “what differs” things?

Each white box shown to the right represents the pattern drawn by one use of the quilt block function. Label the picture with the specific values to use for each function call. The drawing window is 400x400.



**Exercise 4a**

You must have at least four different compound things built out of three or more shapes each, and you must demonstrate variation in position, size, and color. Identify what those elements will be and fill in the table below. It is OK to list “position”, “size”, or “color” on a single row but be sure to clarify which aspects you mean e.g. for position, do you mean x or y or both? Leave any extra rows blank.

what is being drawn?	what differs from one copy to the next?

## Exercise 4b

Answer the rest of the drawing function questions for each of the functions you identified in #4a. Fill in the table below.

what is being drawn?	how is it drawn?	what are the specific values for the “what differs” things?