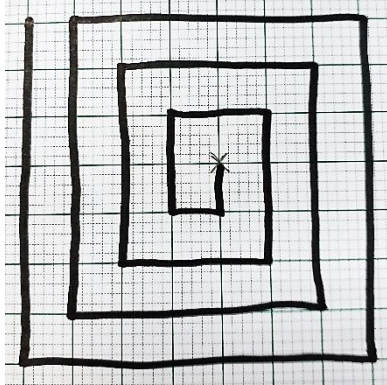


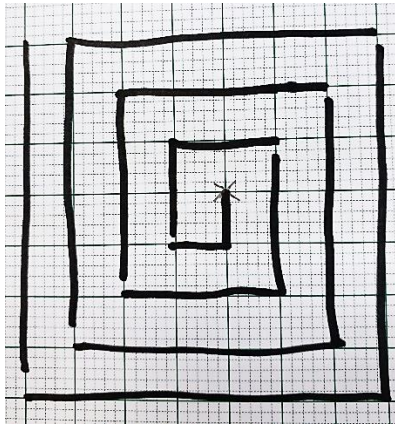
Loop revisit

Cindy wants to write a program to instruct the robotic arm to draw the figure.

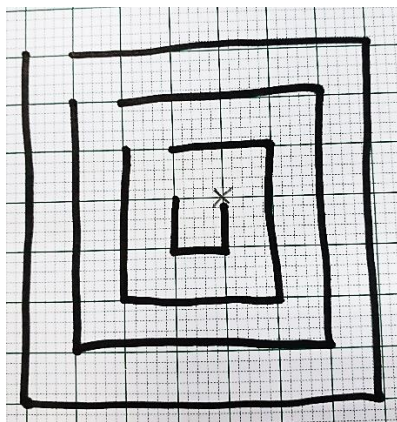


Her classmate Amy suggested that she use the loop structure.

Amy said, "Imagine this figure is made up of 7 L-shaped elements of different sizes glued together."



However, another classmate, Betty, said: "I have another idea! You might as well imagine the figure as composed of 4 squares (7x7, 5x5, 3x3, 1x1), the programming efficiency will be much higher."



Which strategy do you prefer, Amy's or Betty's? Why?

Video watching . . .

Write down the coordinates of all the points involved.

Complete the following table (assuming the coordinates of the cross is (250, 0))

Square	Top-right corner	Bottom-right corner	Bottom-left corner	Top-left corner	Last point
7 x 7	(210, 30)		(280, -40)		(220, 30)
5 x 5		(220, -30)		(270, 20)	
3 x 3	(230, 10)		(260, -20)		(240, 10)
1 x 1		(240, -10)		(250, 0)	- - -

How many variables are needed?

Revision:

A typical loop construct looks like:

Initial values before entering the loop

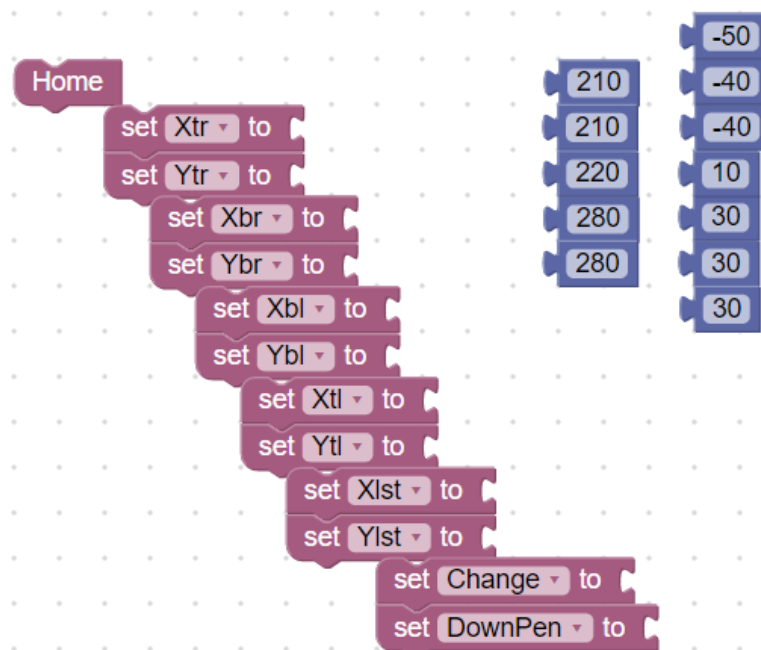
Loop start

- The repeat action
- Update values

Loop end

What are the 3 important sections?

Variables Manipulation (before entering the loop)

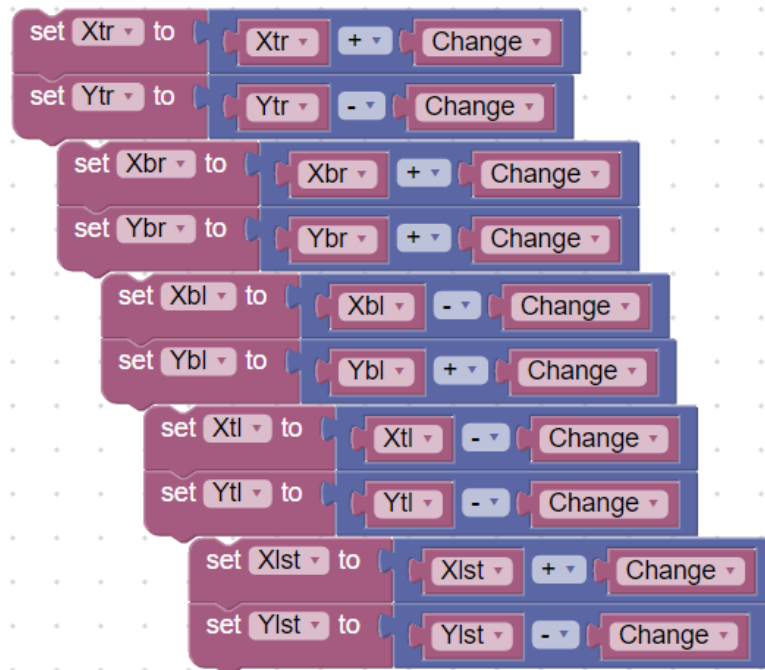


Compare yours with what is displayed on the screen.

Prepare the Loop construct.



Variables Manipulation (within the loop)



Compare yours with what is displayed on the screen.

Insert MoveTo blocks to draw the 4 squares.



Where should they be inserted? Why?

Compare yours with what is displayed on the screen.

Modify your Blockly program to draw the following figures

