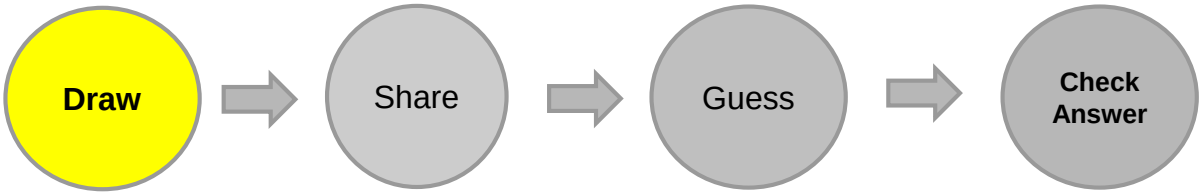
SKETCH AND GUESS

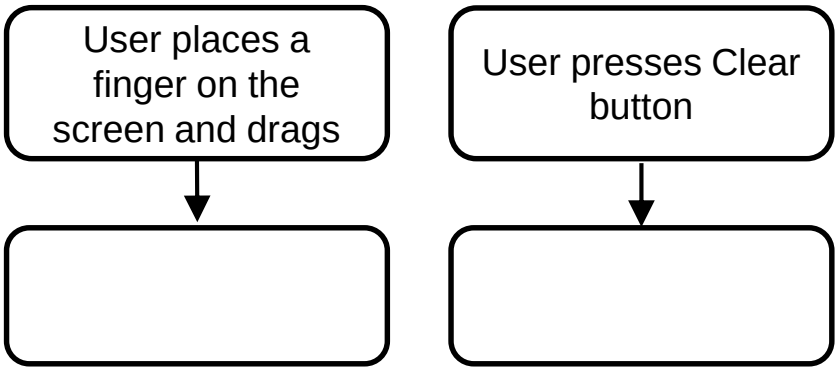
In this lesson, you will build a drawing app as the first part of your final Sketch and Guess app.



ORDER OF EVENTS

❏ Review with your partner the diagrams below. Check that you understand the sequence of steps for the Sketch and Guess app. Fill in the empty spaces with A or B.

A. Clear the screen	B. Draw a line where the user has dragged

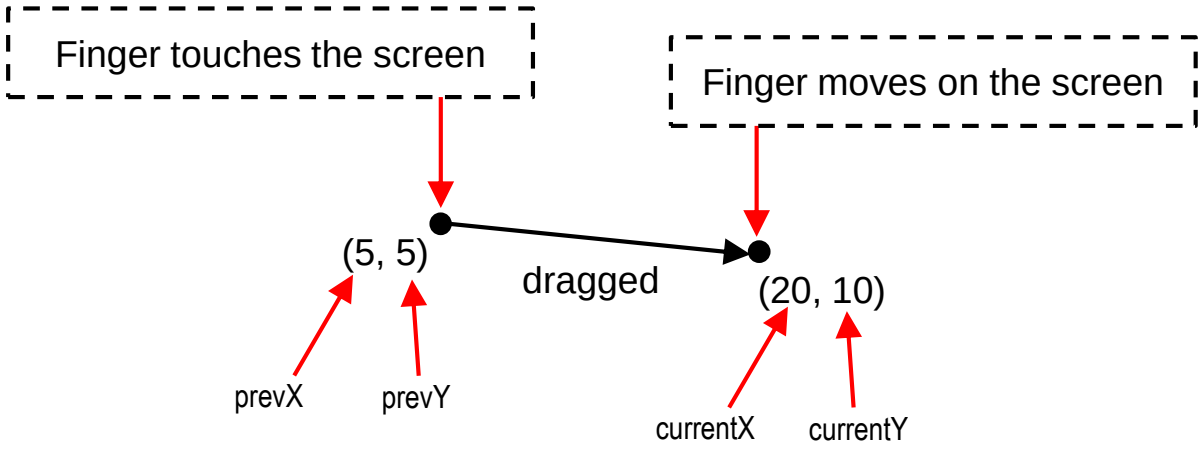


SKETCH AND GUESS

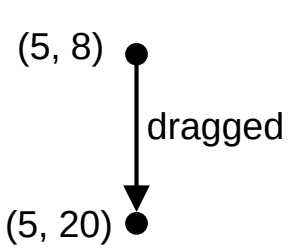
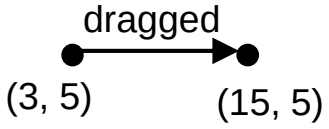
UNDERSTAND HOW TO DRAW A LINE IN THE APP

To draw something on the Canvas, we need to use the **when Canvas.Dragged** block and the **call Canvas1.DrawLine** block.

Below is a demonstration that shows how to use coordinates to draw a line in the app. A line is drawn by joining two points. Using **call Canvas1.DrawLine** block, we need to specify the position of the start point (x1, y1) and the position of the end point (x2, y2).



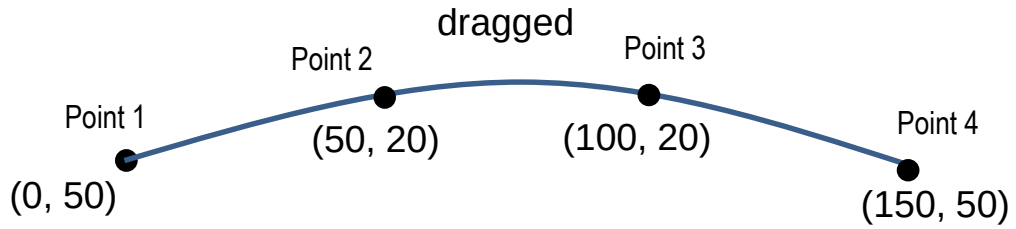
Therefore, if we want to draw a line in the app, we need to use **prevX**, **prevY** and **currentX**, **currentY**. Below please work with your partner to fill in the blanks.

		
prevX		
prevY		
currentX		
currentY		

SKETCH AND GUESS

UNDERSTAND HOW TO DRAW A CURVE IN THE APP

A line is formed by many dots. Each of the dots is represented by coordinate (x,y).



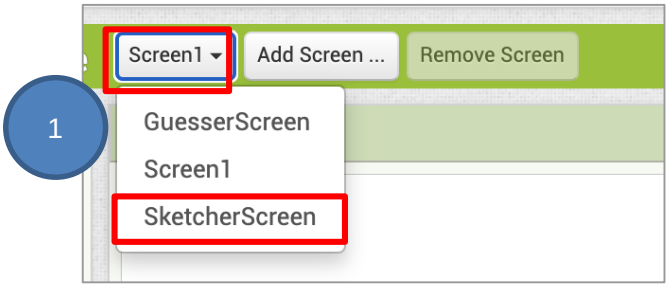
Therefore, if we want to draw a curve in the app, we need to draw many points, each with their own **prevX**, **prevY** and **currentX**, **currentY**. Below please work with your partner to fill in the blanks.

	Point 1 - Point 2	Point 2 - Point 3	Point 3 - Point 4
prevX			
prevY			
currentX			
currentY			

SKETCH AND GUESS

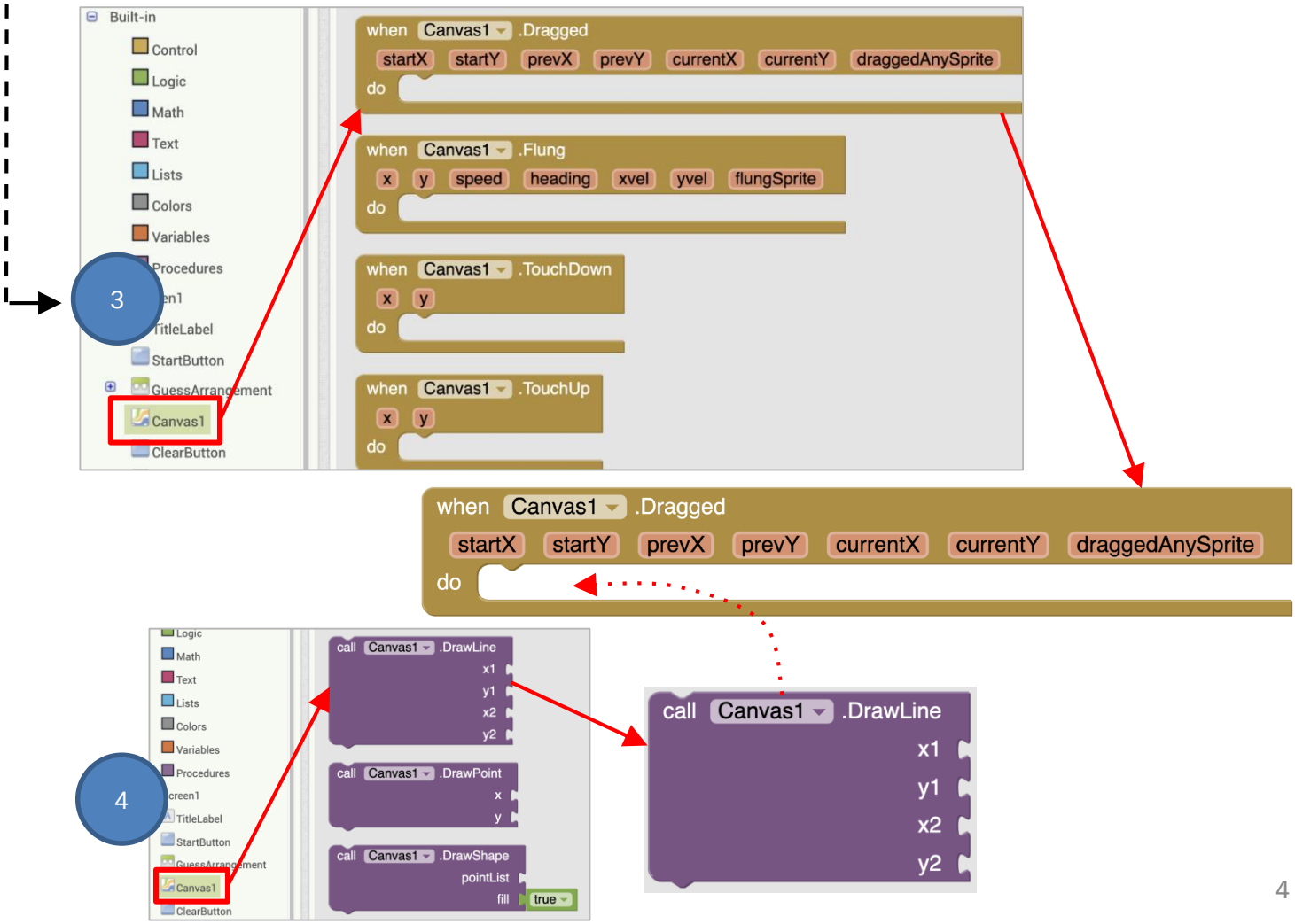
DRAW WHEN WE DRAG ON THE CANVAS

❑ Switch to SketcherScreen and open the Blocks Editor.



Notice that there are some code blocks already provided for you. Some blocks will be used in future lessons. Do not worry! The student guides will let you know when and how to use them!

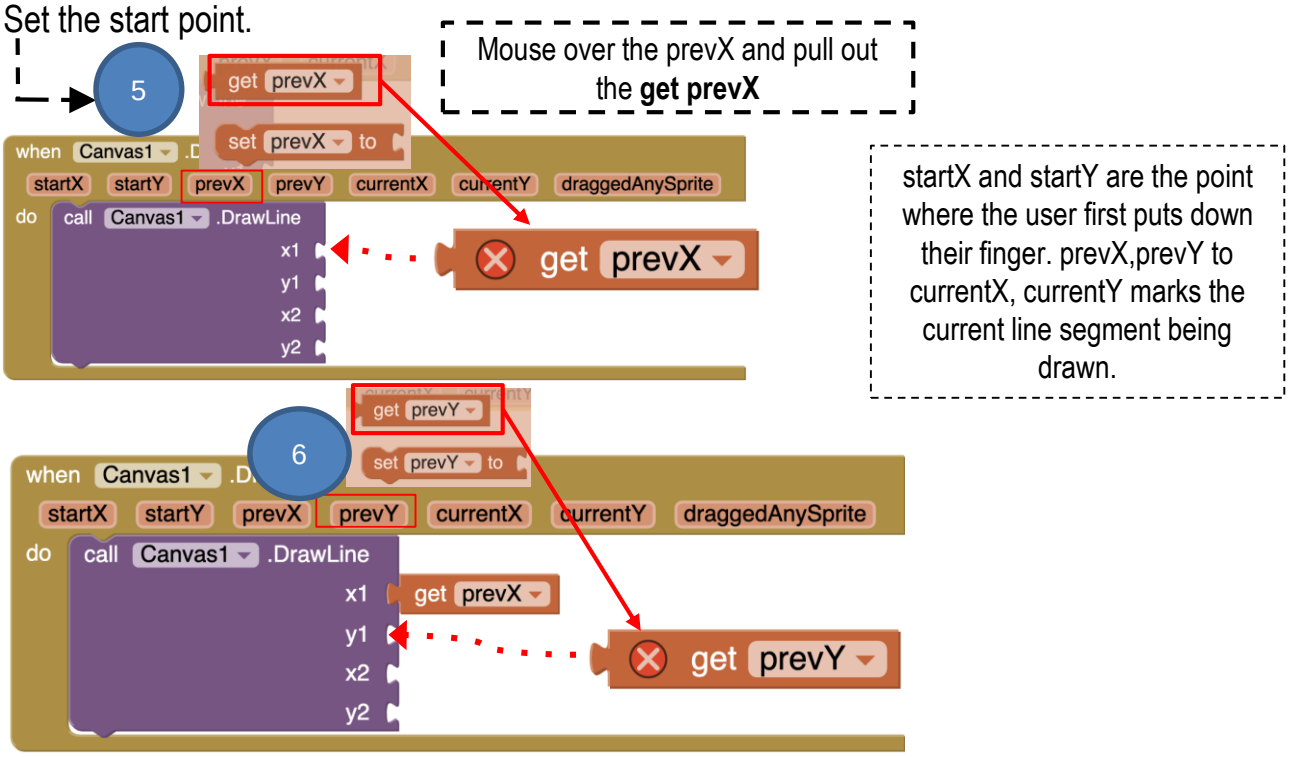
❑ From the Blocks menu, pull out **when Canvas1.Dragged** and **call Canvas1.DrawLine** blocks.



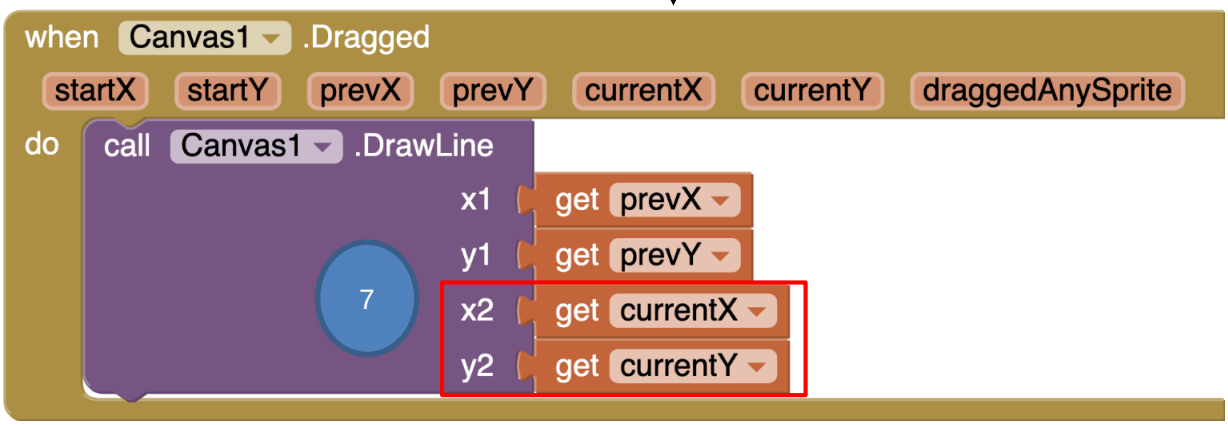
SKETCH AND GUESS

SPECIFY THE START AND END POINTS

❑ Set the start point.



❑ Continue to set the end point: set x2 and y2 to currentX and currentY respectively.

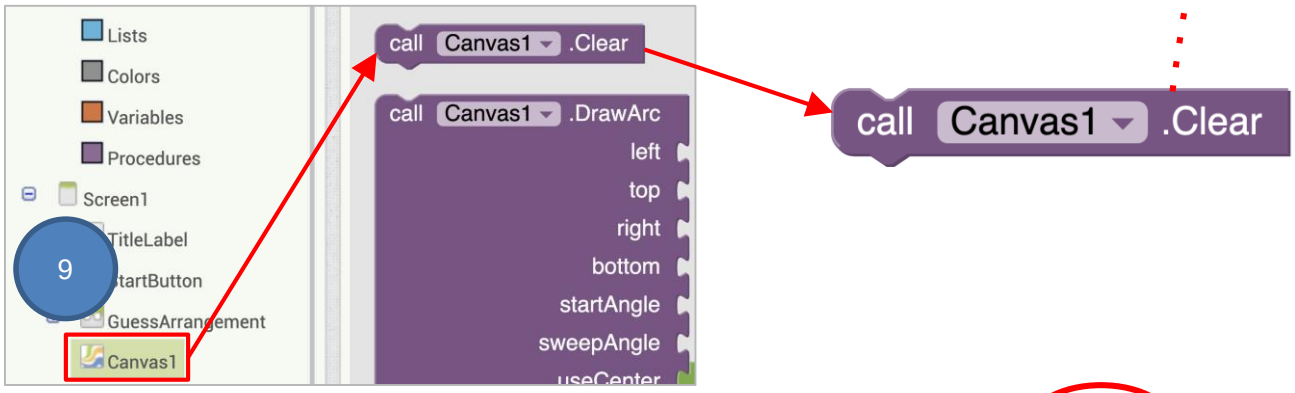


SKETCH AND GUESS

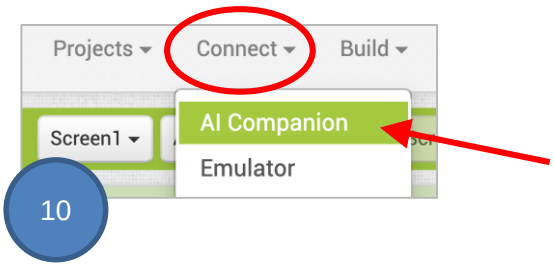
CLEAR THE CANVAS

❑ Pull out a **when ClearButton.Click** block.

❑ Snap the **call Canvas1.Clear** block to **when ClearButton.Click** block.



❑ Test your app using MIT AI2 Companion.
Try drawing something on your device, then try pressing the Clear button to clear the Canvas.



SKETCH AND GUESS

COMPUTATIONAL THINKING CONCEPTS

The following are the computational thinking concept learnt in Lesson 2.

L3U8.6-8.8 Sketch And Guess
1. Events