

## Here's a cheat sheet for Tinkercad's Blockly code:

### Events:

- "When Start": Executes the code when the simulation starts.
- "When Button Pressed": Executes the code when a button is pressed.

### Basic Blocks:

- "Set [variable] to [value]": Assigns a value to a variable.
- "Change [variable] by [value]": Adds or subtracts a value from a variable.
- "Show": Displays a message or value in the console.
- "Wait [value] seconds": Pauses the program for a specified time.

### Logic Blocks:

- "If [condition] then": Executes the code inside the block if the condition is true.
- "If [condition] then else": Executes the code inside the first block if the condition is true; otherwise, executes the code inside the second block.

### Loop Blocks:

- "Repeat [value] times": Repeats the code inside the block a specified number of times.
- "Repeat until [condition]": Repeats the code inside the block until the condition is true.
- "Forever": Repeats the code inside the block indefinitely.

### Math Blocks:

- "Random [start] to [end]": Generates a random number between the start and end values.
- "Pick random [list]": Picks a random item from the provided list.

### Input/Output Blocks:

- "Button [button] pressed": Checks whether a specific button is pressed.
- "Digital Read [pin]": Reads the digital state (HIGH or LOW) of a pin.
- "Analog Read [pin]": Reads the analog value (0-1023) of a pin.
- "Digital Write [pin] [value]": Sets the digital state (HIGH or LOW) of a pin.
- "Analog Write [pin] [value]": Sets the analog value (0-255) of a pin.

### Advanced Blocks:

- "Map [value] from [in\_min]-[in\_max] to [out\_min]-[out\_max]": Maps a value from one range to another.
- "Constrain [value] between [min]-[max]": Constrains a value within a specific range.
- "Math [operator] of [value1] and [value2]": Performs mathematical operations such as addition, subtraction, multiplication, division, etc.

This cheat sheet covers some of the commonly used blocks in Tinkercad's Blockly code. Remember to explore the available blocks in the interface for more options and functionalities.