

Project

I. Use the information below to fill in the blanks for Algorithms J and K.

Algorithms J:

Algorithm J resets the Pitcher to his starting position:

The input for this algorithm is clicking the Green flag

The outputs are:

- a) the Pitcher switches to costume pitcher-a
- b) set the Pitcher position to $x = -200, y = 10$

Algorithms K:

Algorithm K moves the Pitcher to throw the ball:

The input for this algorithm is pressing the number 1 key

The outputs are:

- a) the Pitcher glides to position $x = -110$ and $y = 17$ for 1 second
- b) he then switches costumes to pitcher-b and pitcher-c in 2 second intervals
- c) the Pitcher switches to costume pitcher-d.

Pitcher

| Algorithm J | |
|-------------|--|
| Step | Instruction |
| 1 | Start program when _____ is pressed |
| 2 | Switch costume to _____ |
| 3 | Set pitcher to position $x = ______, y = ______$ |
| 4 | Stop program |



| Algorithm K | |
|-------------|--|
| Step | Instruction |
| 1 | Start program when _____ key is pressed |
| 2 | Glide _____ second to $x = ______, y = ______$ |
| 3 | Switch costume to _____ |
| 4 | Wait _____ |
| 5 | Switch costume to _____ |
| 6 | Wait _____ |
| 7 | Switch costume to _____ |
| 8 | Stop program |



Batter

| Algorithm L | |
|-------------|--|
| Step | Instruction |
| 1 | Start program when Green flag is pressed |
| 2 | Switch costume to batter-a |
| 3 | Set batter to position $x = 146, y = 50$ |
| 4 | Stop program |

| Algorithm M | |
|-------------|--|
| Step | Instruction |
| 1 | Start program when number 1 key is pressed |
| 2 | Wait 5 seconds |
| 3 | Switch costume to batter-d |
| 4 | Start basketball bounce sound |
| 5 | Stop program |

II. Open Scratch Program.

Using Scratch, create the program for the Batter and Pitcher.

- Create a new project and delete Sprite 1.
- Search and select the Baseball 2 backdrop.
- Search and select the Pitcher sprite.
- Add and connect the blocks of code for Algorithms J and K.
- Search and select the Batter sprite.
- Add and connect the blocks of code for Algorithms L and M.
- Click the Green flag. Describe what happens.

h) Press the number 1 key. Describe what happens. Did the program run as you expected? If not, check your algorithms and code for any errors. Correct it.

- _____
- Run your code again.
 - Save your project.

Extension Task:

Add basketball bounce sound:

Click the Sounds tab. Click on Choose a sound.

Search for Basketball bounce. Click on it to select the sound. It will appear in the dropdown list for the play sound () until done block.



| Rubric for Scratch Programeet | | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| Identify the algorithm | | | |
| Open Scratch Program | | | |
| Add sprites | | | |
| Add backdrop | | | |
| Make a linear program for pitcher | | | |
| Make a linear program for batter | | | |
| Debug the program | | | |
| Run the program | | | |
| Key: 1. Needs more opportunities to develop this skill. 2. Beginning to demonstrate this skill. 3. Has achieved this skill. | | | |