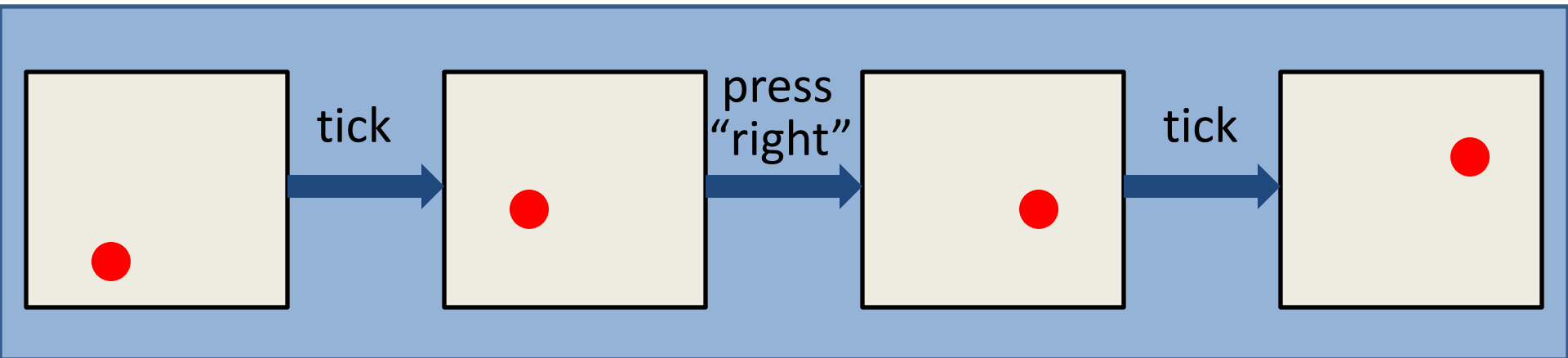


StoryBoards

A series of frames, connected by game actions



Can be used to sketch out game behaviors/requirements

Goal: allow students to plan games through storyboards, then use those boards as test cases while writing their game

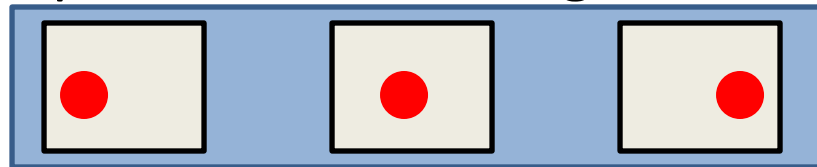
Student Workflow: Design Phase

- fill in a game design worksheet with characters and how they change (as in current workbook)

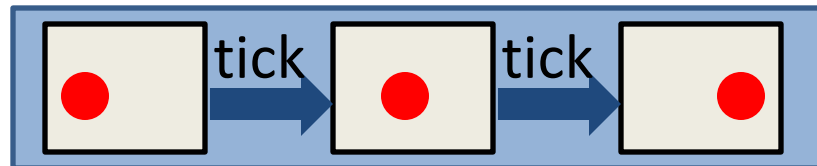
- get blank storyboard



- drag/drop graphics to make images



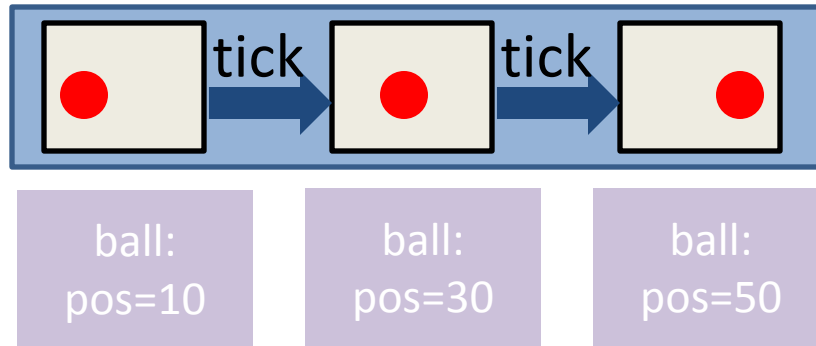
- add arrows indicating action from frame to frame (action choices given through drop-downs)



- can “play” board to see animation in action
- make more boards to show corner cases, etc

Student Workflow: Frames to Worlds

- Pick a storyboard. For each frame, instantiate the worksheet with current character data



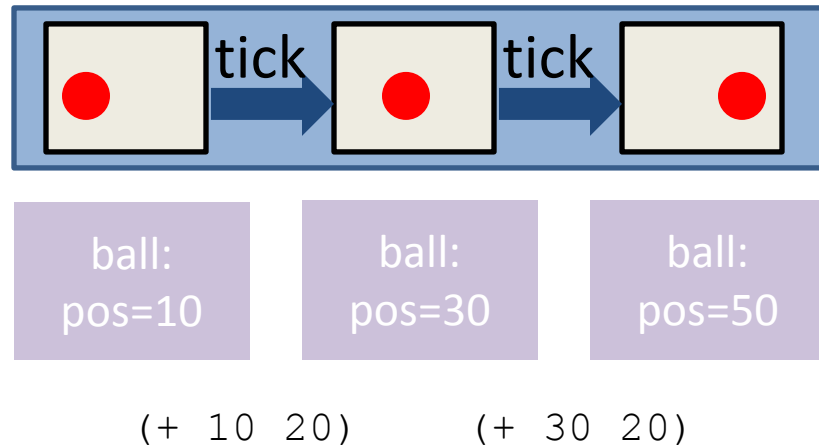
- write `place-image` expressions for each frame/sheet

```
(place-image BALL  
  10 50  
  blank)    ...    (place-image BALL  
  50 50  
  blank)
```

- abstract to create a `draw-scene` function; recreate existing frames using that function (test against storyboards)

Student Workflow: Animation

- write expressions to compute new character data (worksheet) from previous frame's on each arrow



- abstract to create update functions

Student Workflow: Testing

- Once functions have been written, tool can simulate the configuration and action of each storyboard against the provided functions
 - test each character update function against the contents of the worksheet instances (i.e., generate the test cases from the worksheet instances)