

# Digital Ink and Paint

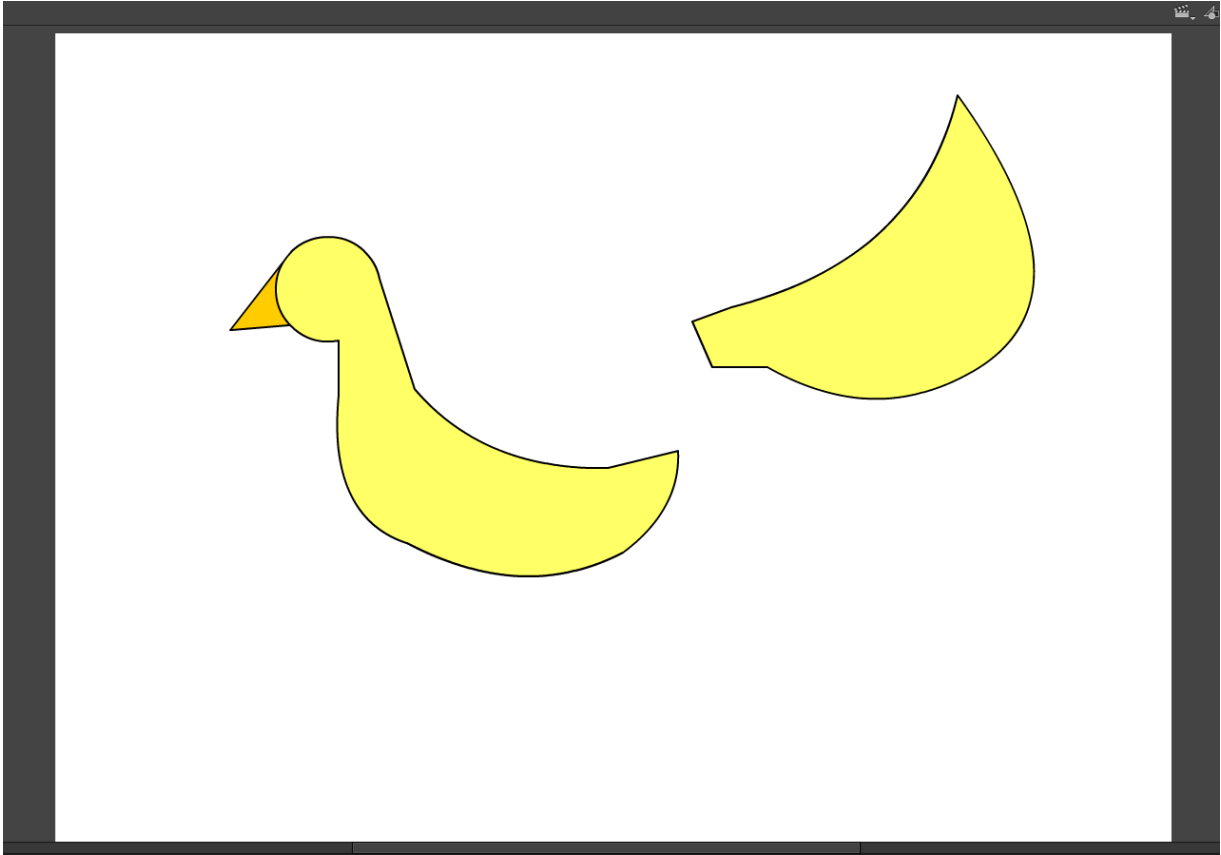
## Week 5

Animation: Animated Symbols, Graphic  
Symbols vs Movie Clip Symbols,  
Bones, 3D Translation

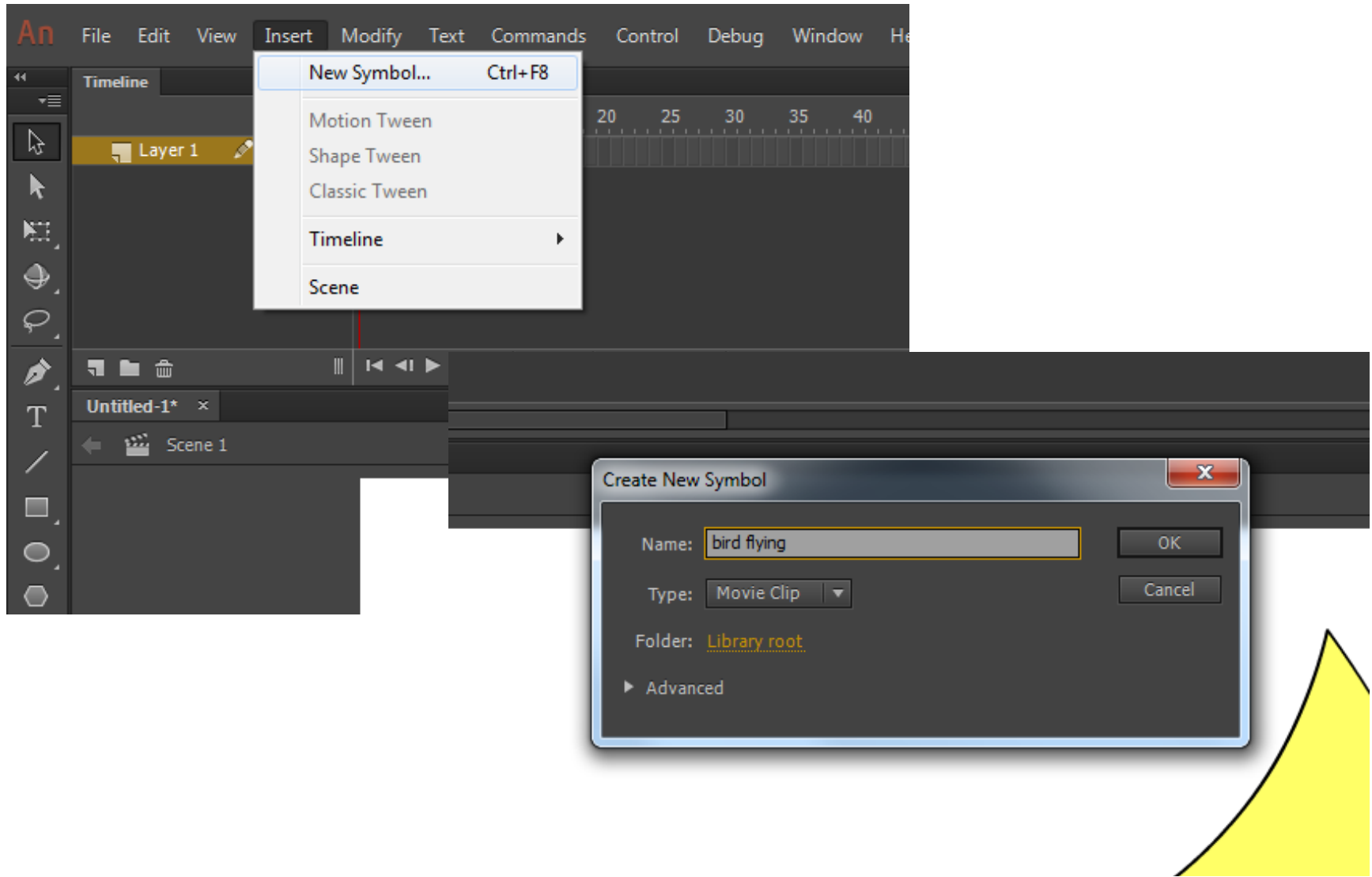
# Graphic Symbols and Movie Clips have their own Time Line.

- You can create animation using Classic, Motion, Shape Tweening in the Symbol Time Line, Just as you would the Main Time Line.
- The same rules apply: Classic and Motion Tween **MUST** use Instances of Symbols

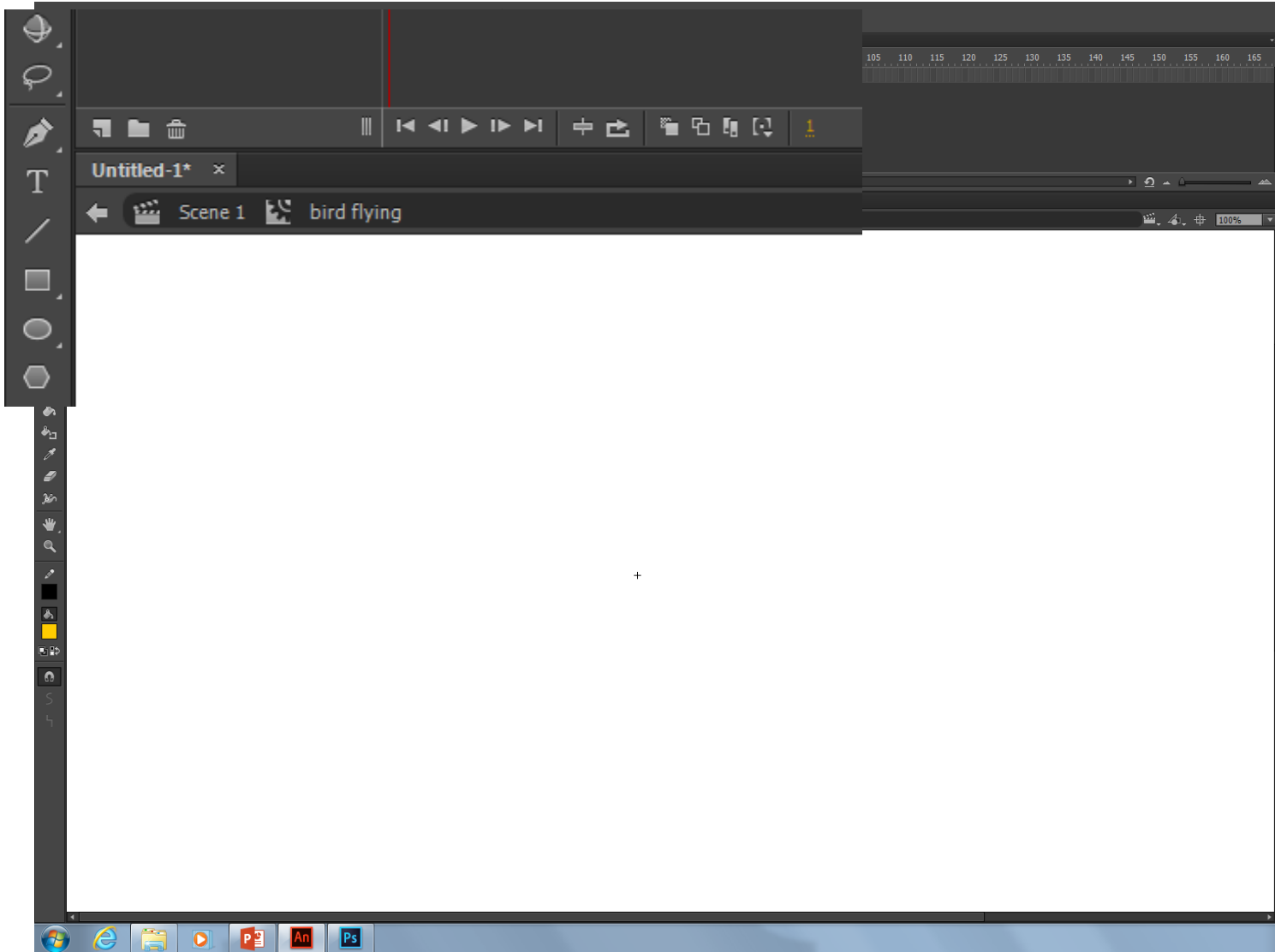
# Create Assets and Convert to Symbols



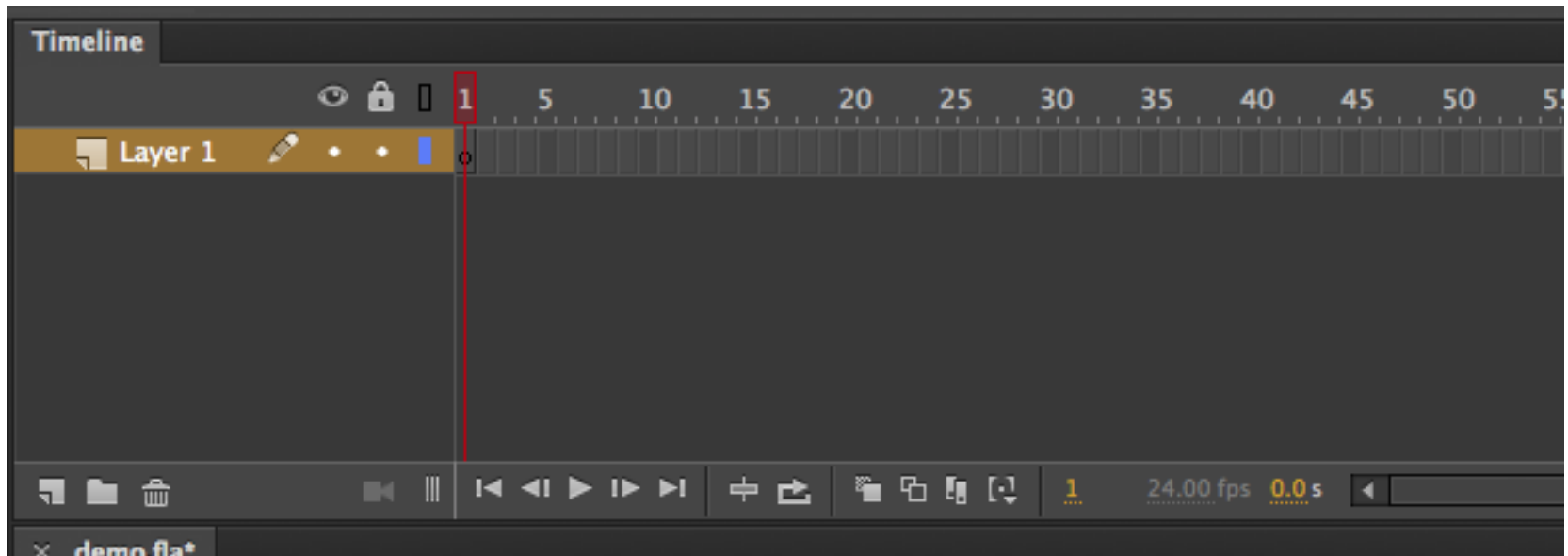
# Create a New, Blank (empty) Symbol



# Create a New, Blank (empty) Symbol

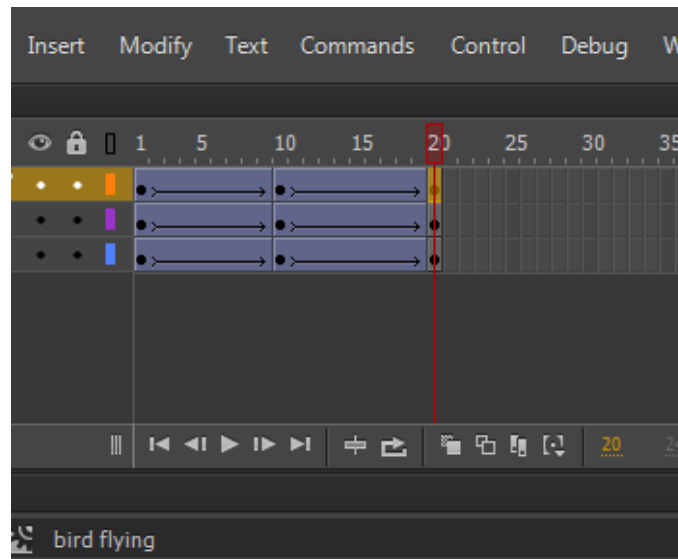


# Symbol Time Line contains one Layer and one Blank Key Frame



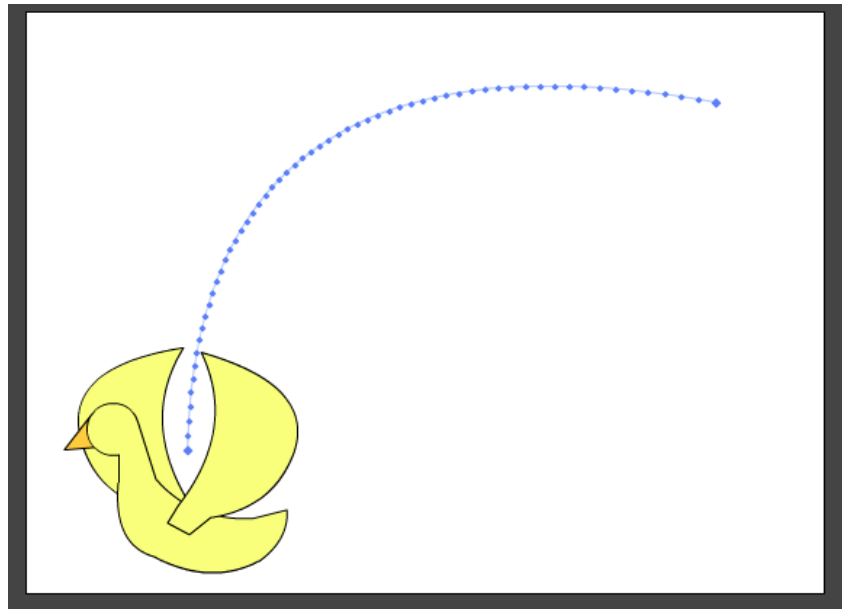
# Animate in the Symbol Time Line

- Create Layers
- Add Frames
- Drag Assets from Library into Layer keyframes
- Animate the Bird Flapping wings in one complete cycle



# Return to Stage

- Insert frames into Main Time Line
- Drag Flying Bird from the Library onto Stage
- The Flying Bird is an Instance, just like the Instances you have been animating for the past two weeks.





# Animated Graphic Symbols vs Animated Movie Clips

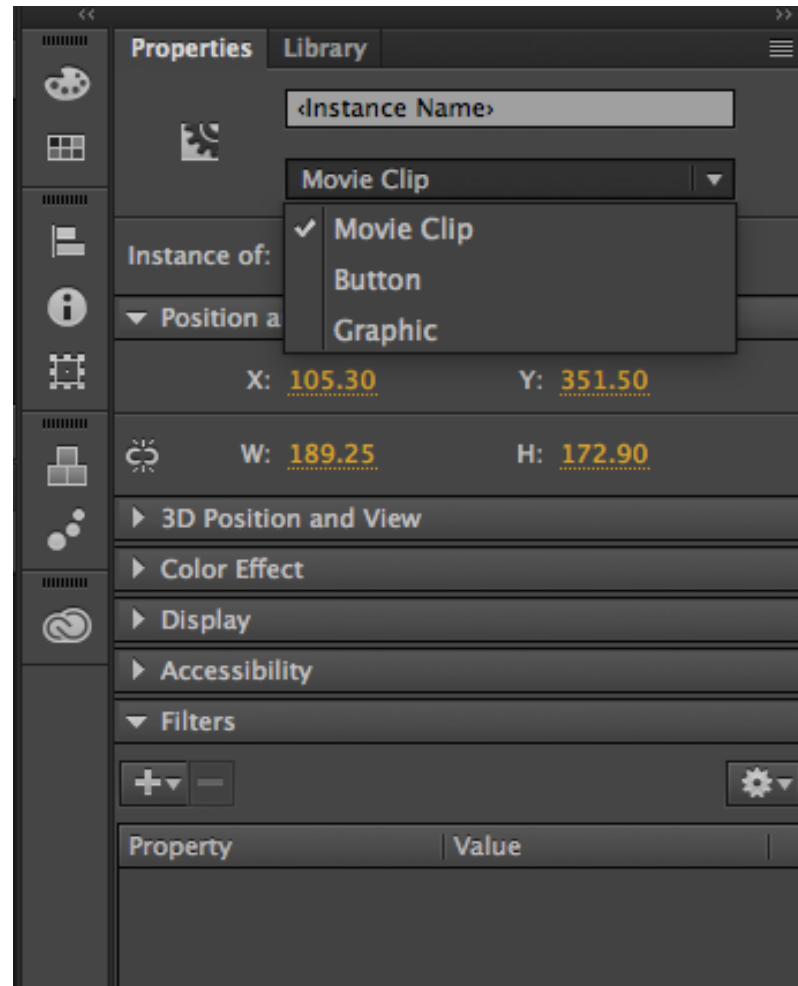
- Graphic Symbols
  - Play on the stage
  - Has Looping options
  - Need the same amount of frame on Main Time Line as in Symbol Time Line
  - Cannot add Filters

# Animated Graphic Symbols vs Animated Movie Clips

- Movie Clip Symbols
  - Does not play on the stage, only when rendered in SWF (Command + Enter, CTRL + Enter)
  - Does not have Looping options
  - Animates in it's own Time Line independently of the Main Time Line
  - Accepts Filters

# Converting Graphic Symbols to Movie Clips

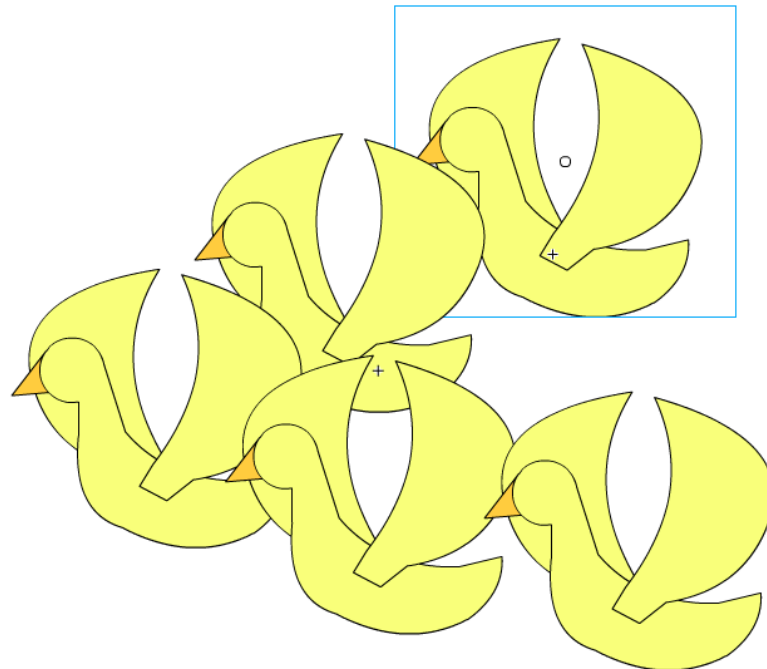
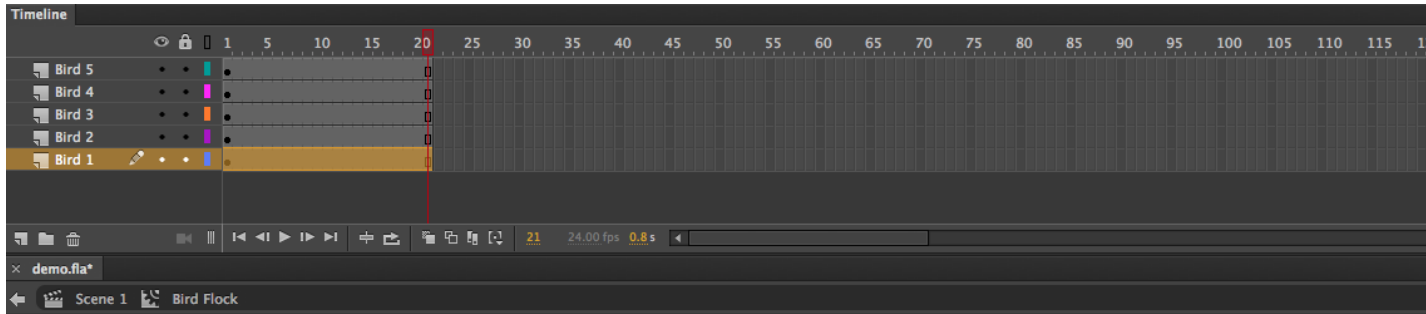
- On Stage
- Select Instance
- Properties Panel



# Nested Animated Symbols

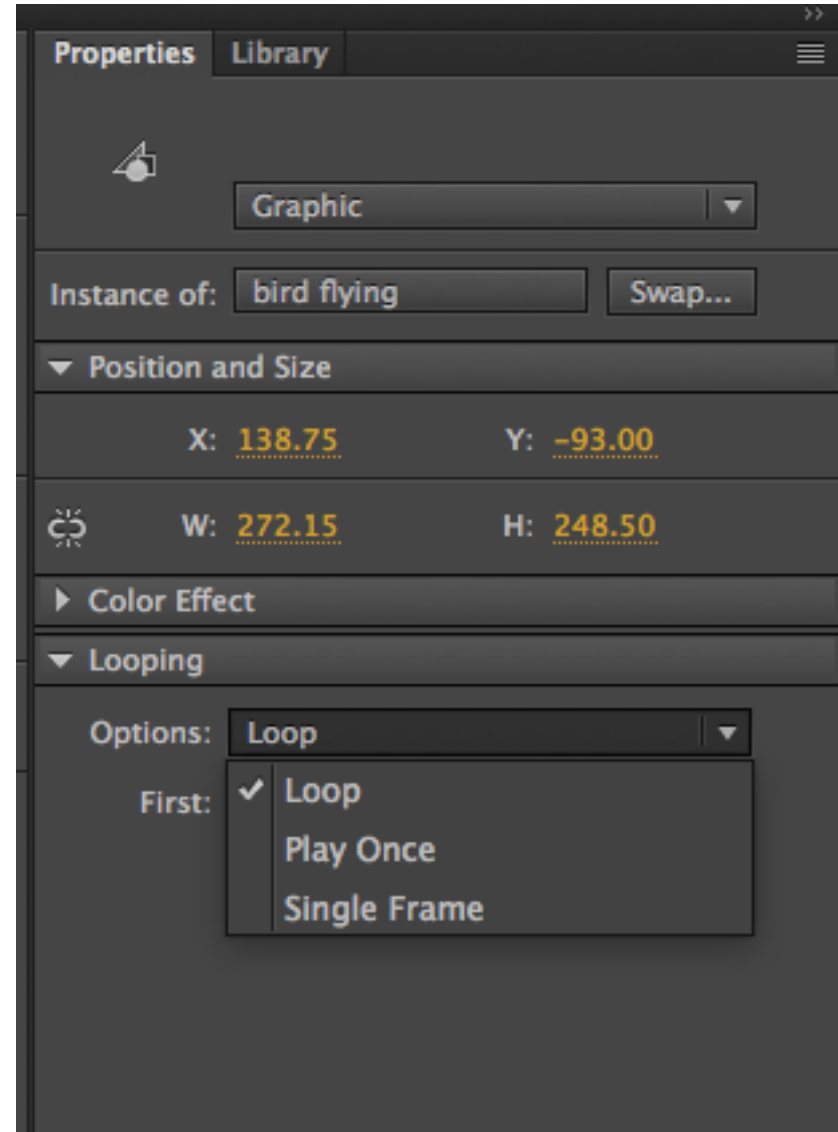
- Animated Symbols Nested in Another Symbol Time Line
- Example: Flock of Birds
  - Create a New, Blank Symbol
  - Add 4 Layers to make a total of 5 Layers
  - Drag one Bird Flying into each layer

# Nested Animated Symbols



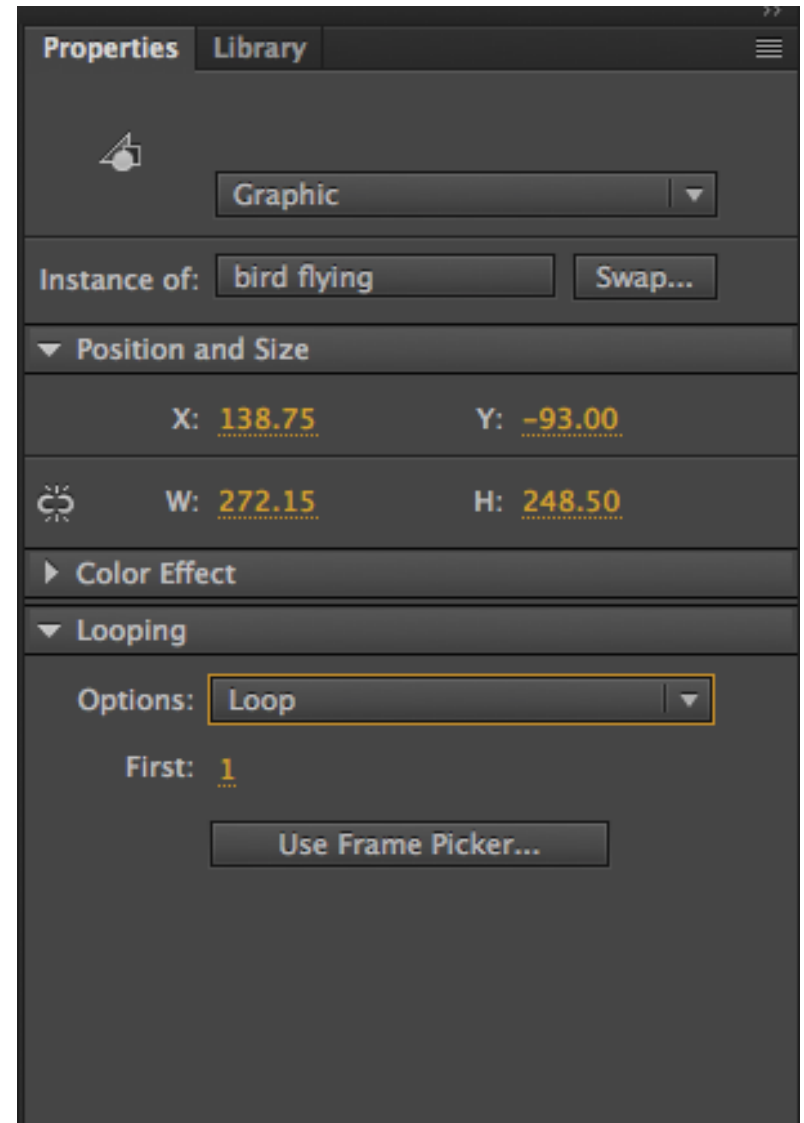
# Animated Graphic Symbol Options

- Select Instance/Properties Panel
- Loop: Standard Cycle
- Play Once: Plays Once and Stops
- Single Frame: Stays Static on one Frame



# Animated Graphic Symbol Options

- First: The Frame the Animated Graphic Symbol starts
- Frame Picker: Choose Starting Frame from Thumbnails



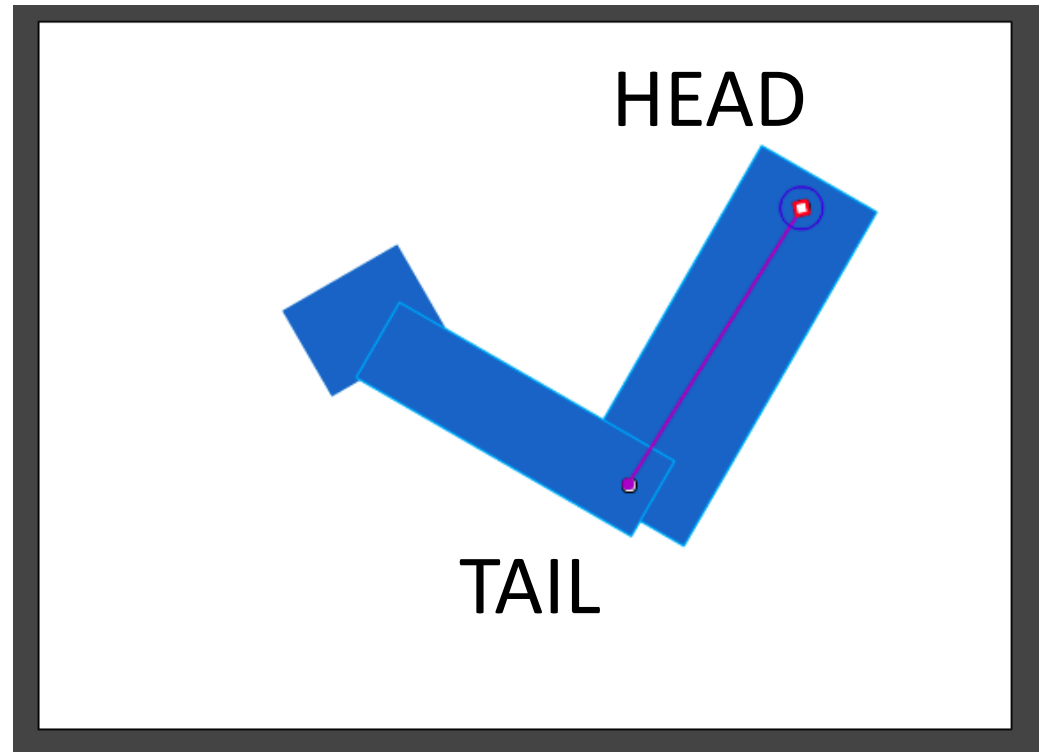
# Bones

- Used Two Ways:
  - With Instances
  - With Shape or Drawing Object



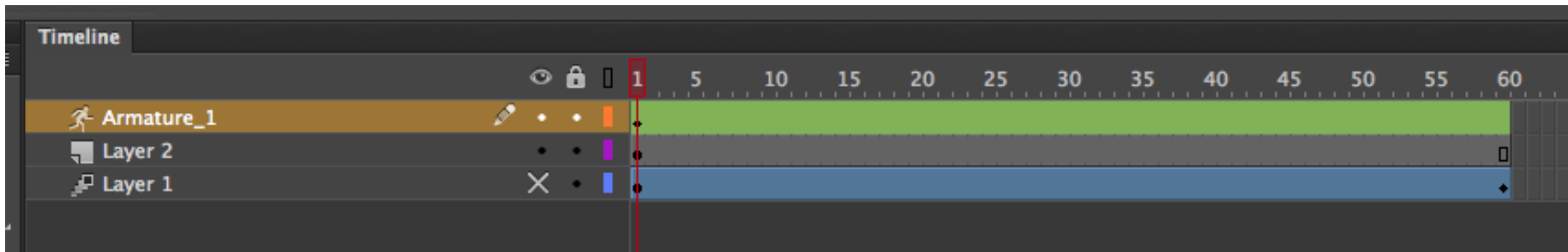
# Bones: Instances

- Bone Tool: Click and drag from Instance Registration Point to Instance Registration Point (Snap)
- Head is the Part of the Bone that Rotates.



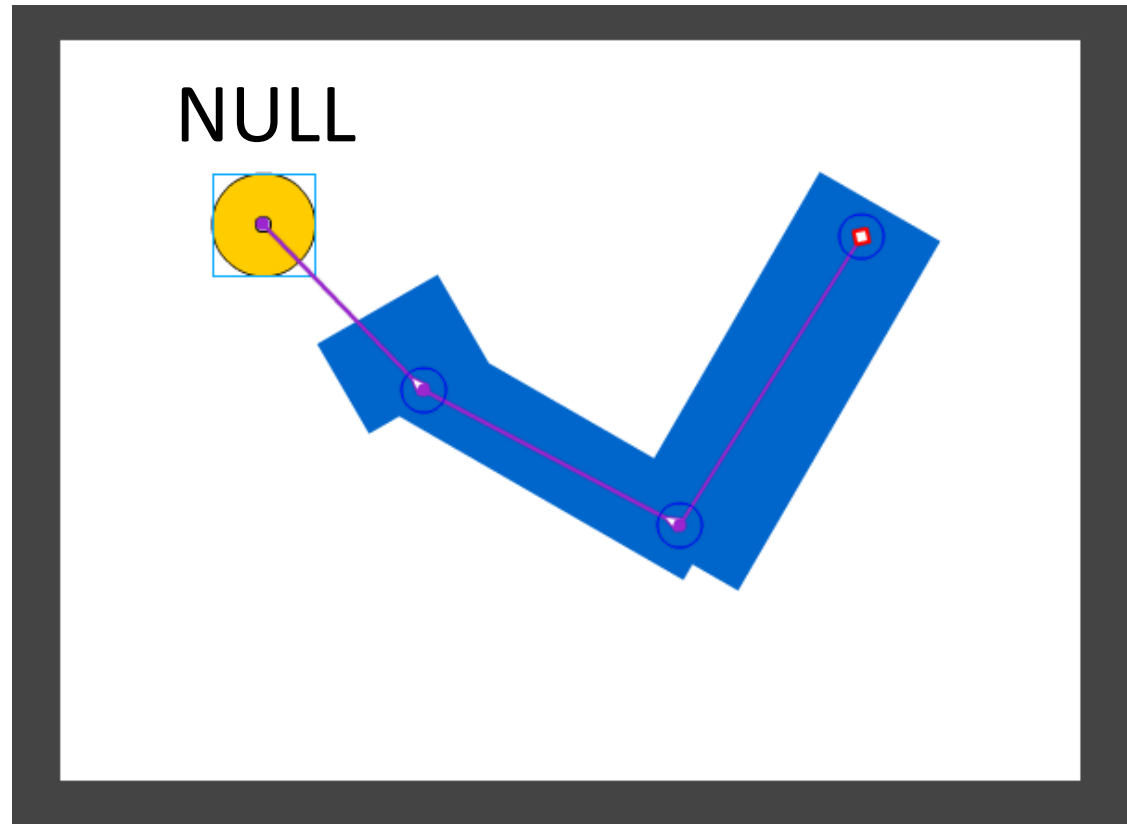
# Bones: Instances

- The Instances are transferred to an “Armature Layer”



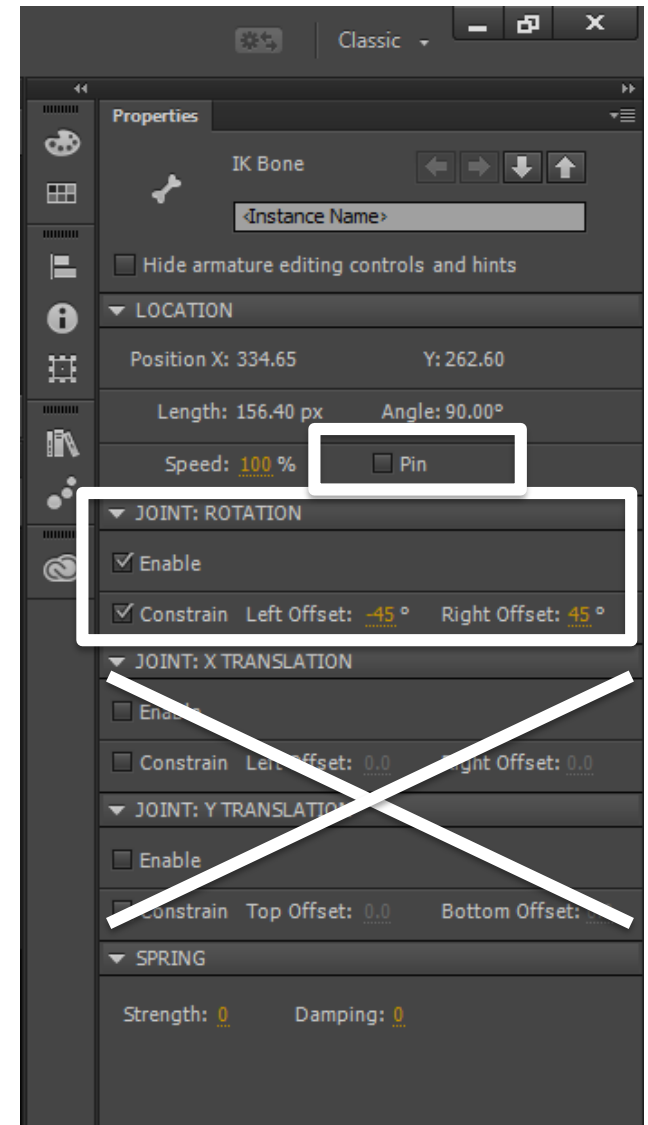
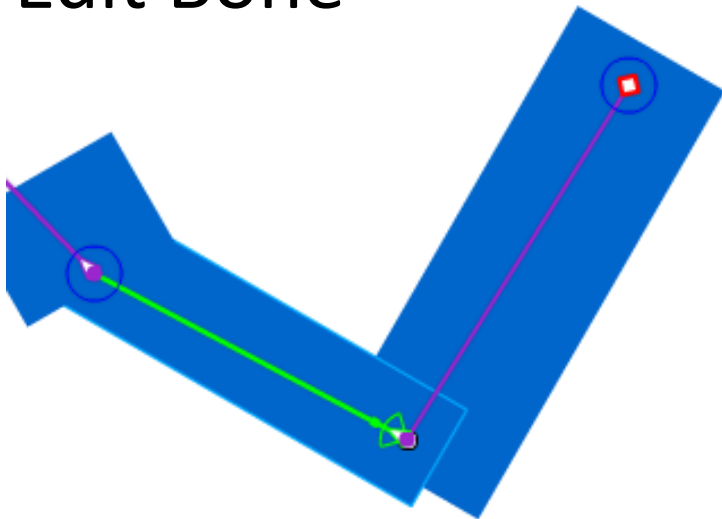
# Bones: Instances

- Add a NULL instance to place the Head of the Bone at a Rotation Joint.
- Command + Click and Drag, CTRL + Click and Drag to Re-Position Bone



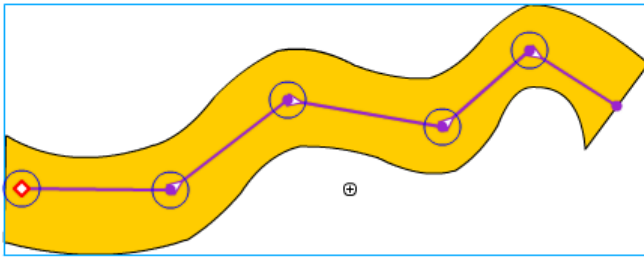
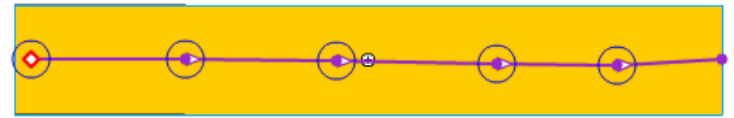
# Bones: Instances

- Restrict Joint Rotation
- Select Bone/Properties Panel/Joint: Rotation/Constrain
- Pin Tail of Bone to Help Edit Bone



# Bones: Shape or Drawing Objects

- Add Shape or Drawing Object to Stage
- Chain Bones



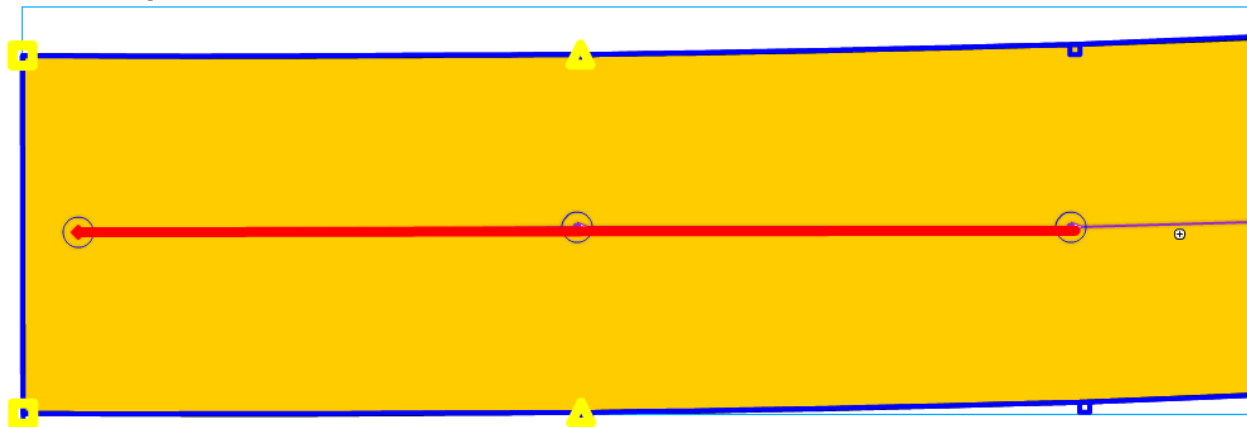
# Bones: Shape or Drawing Objects

- Binding Tool: Edits the Anchor Points Effected by Bone

Square = One Bone Attached to Point

Triangle = Two Bones Attached to Point

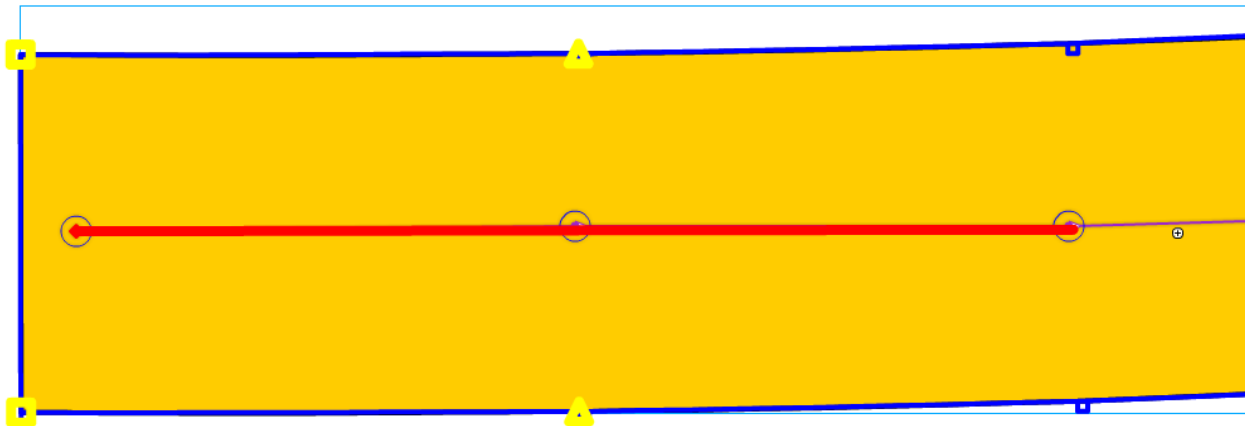
Small Square = No Bone Attached to Point



# Bones: Shape or Drawing Objects

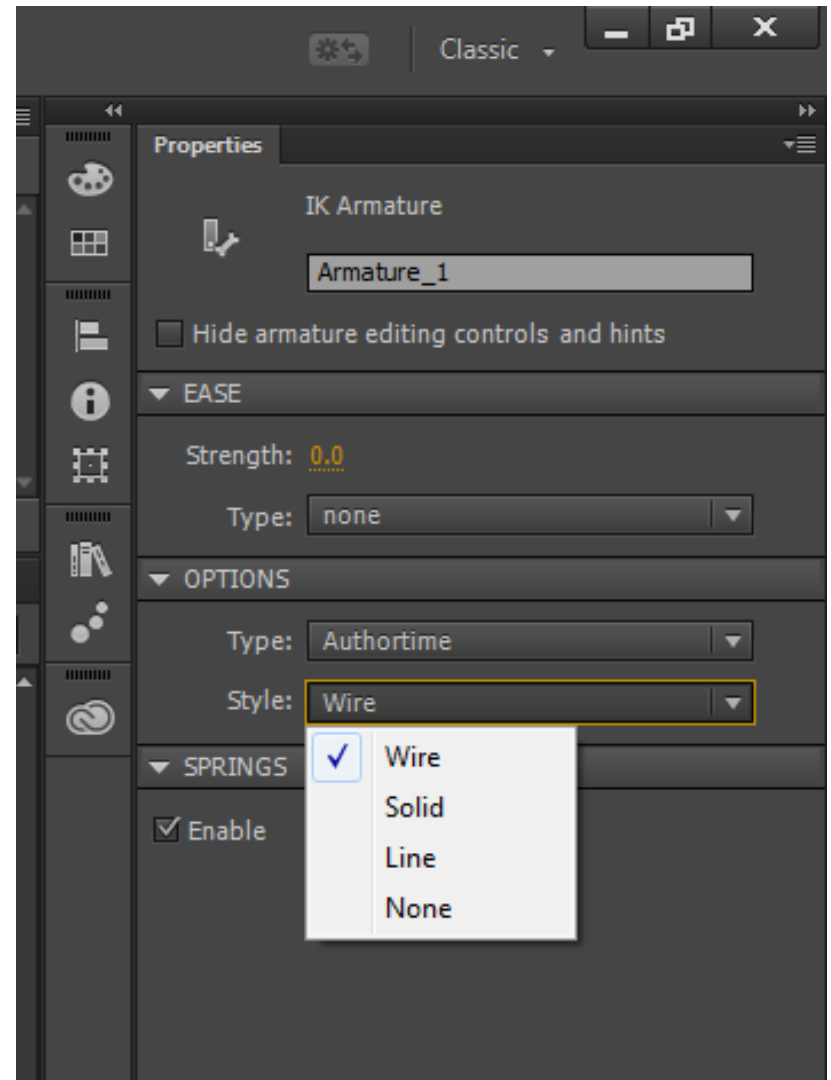
- Binding Tool: Edits the Anchor Points Effected by Bone

Shift + Click and Drag to Add Anchor Point to Bone  
Command (CTRL) + Click to Remove Anchor Point From Bone



# Bones: Options

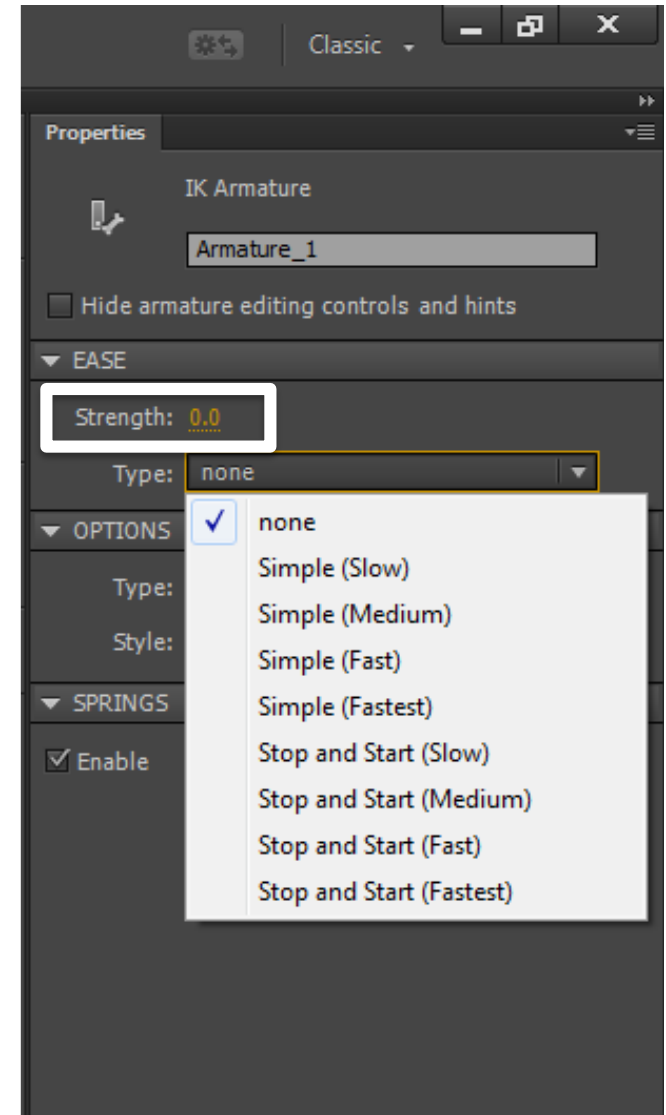
- Select how to view Bones





# Bones: Ease in/out

- Choose a Style of Ease in/out
- Change the Strength
- Use 'Edit Multiple Frames' and 'Outline Inbetweens' to view changes



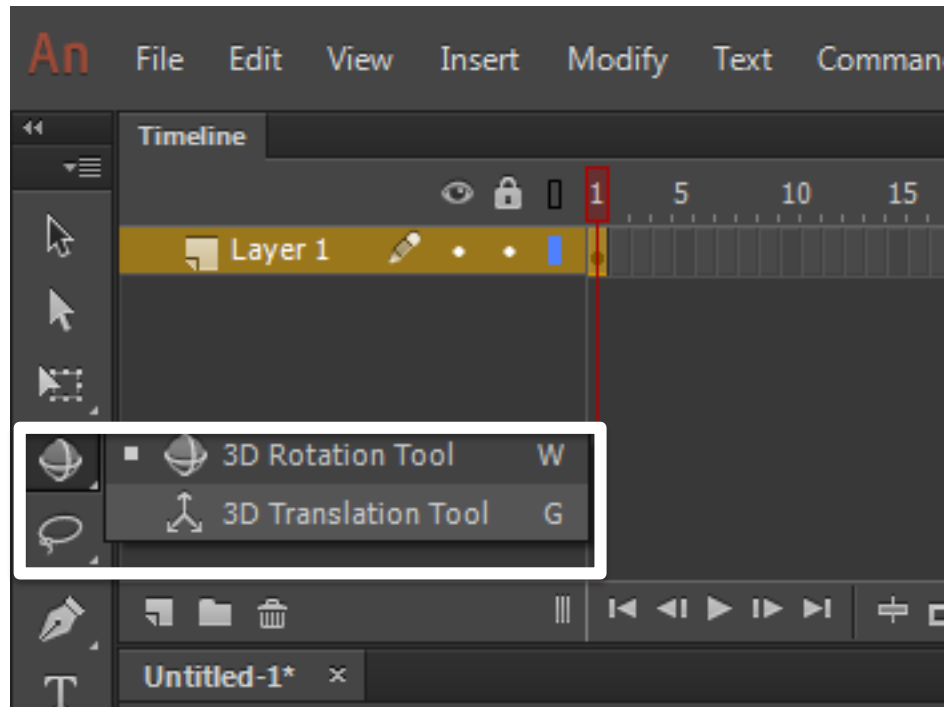
# 3D Rotation, 3D Translation

- 3D Rotation:
  - Rotate in perspective on X, Y and Z Axis
  - Edit Vanishing Point
- 3D Translation:
  - Able to “Mimic” 3D space with Z Axis

# 3D Rotation

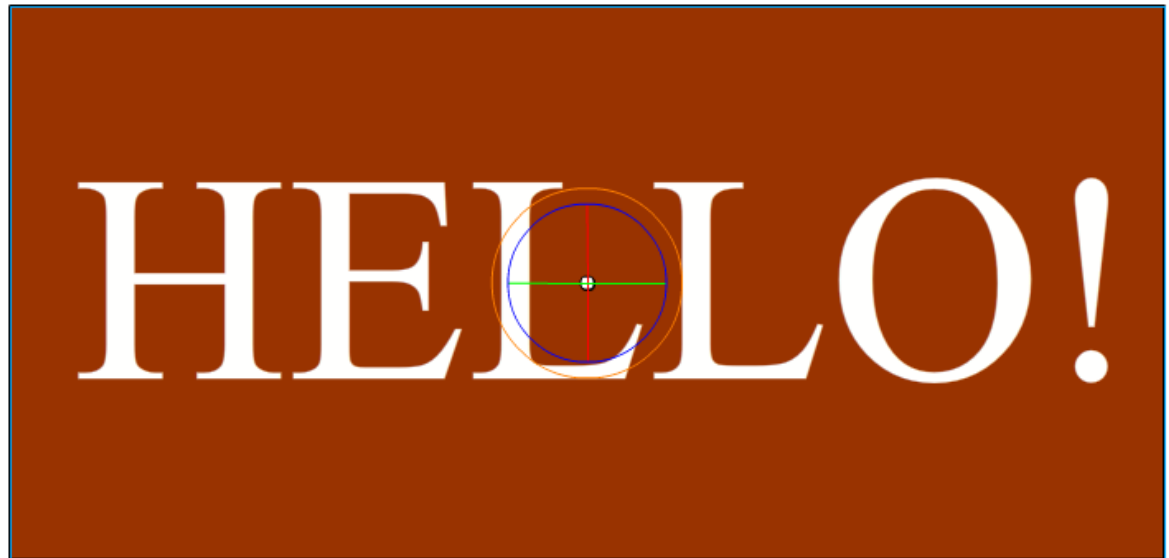
- 3D Rotation:
  - Must be Movie Clip Instances
  - Must use Motion Tweening
  - Edit Vanishing Point

# 3D Rotation



# 3D Rotation

- Orange = All three axis
- Blue = Z Axis
- Red = X Axis
- Green = Y Axis



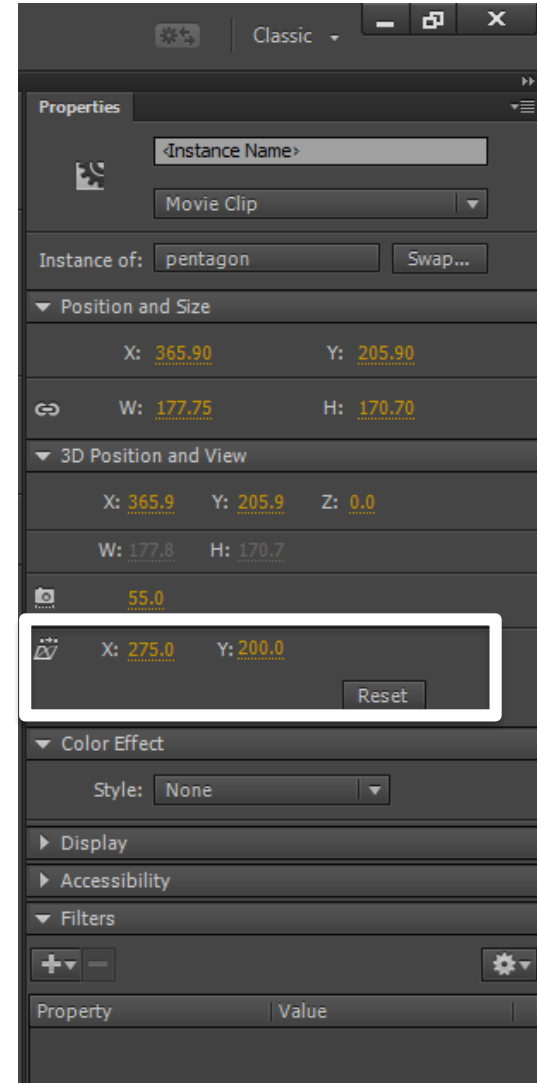
# 3D Rotation

- Movie Clip Rotated on X and Y Axis



# 3D Rotation

- Vanishing Point
- Adjust to edit perspective
- Only one Vanishing Point to a Movie

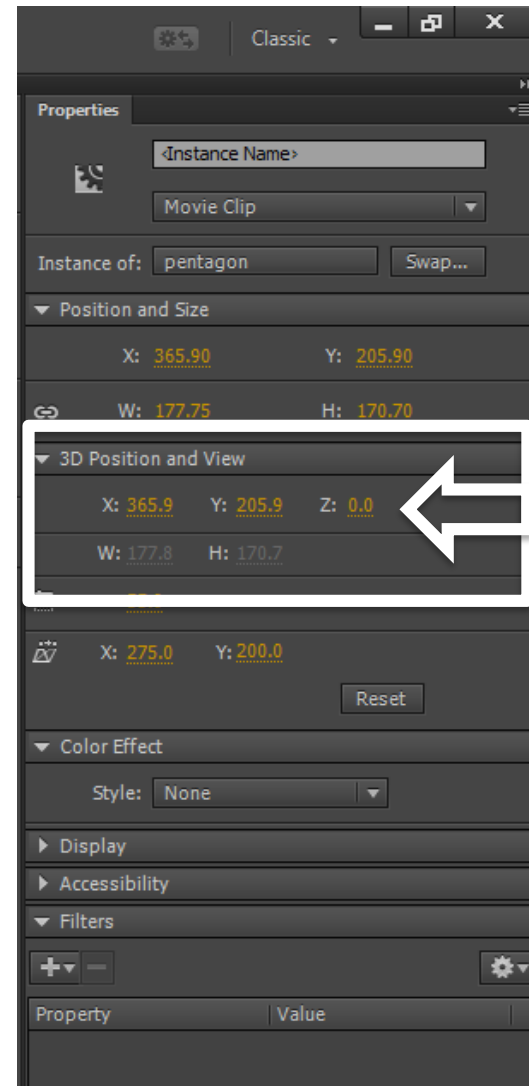
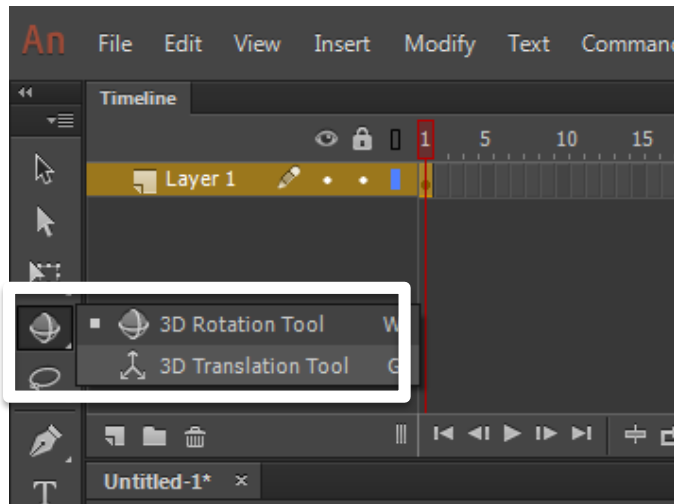


# 3D Translation

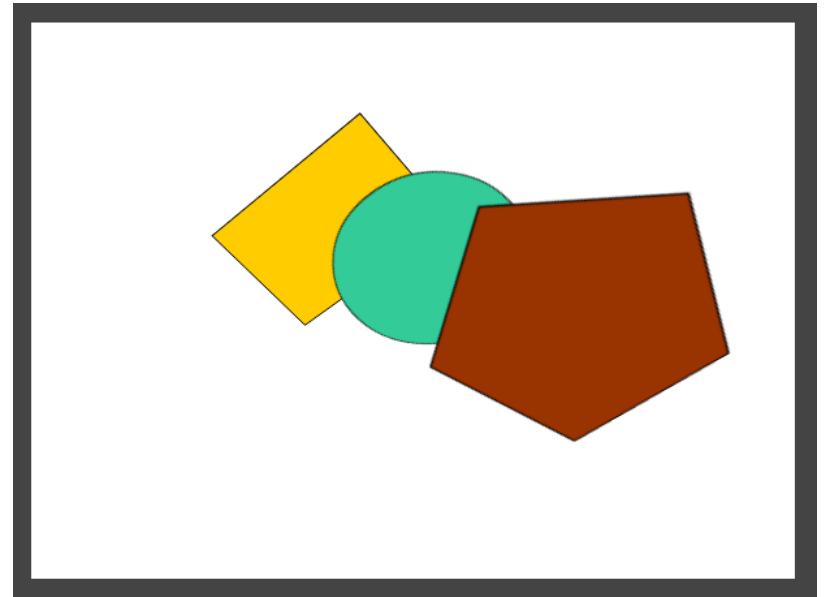
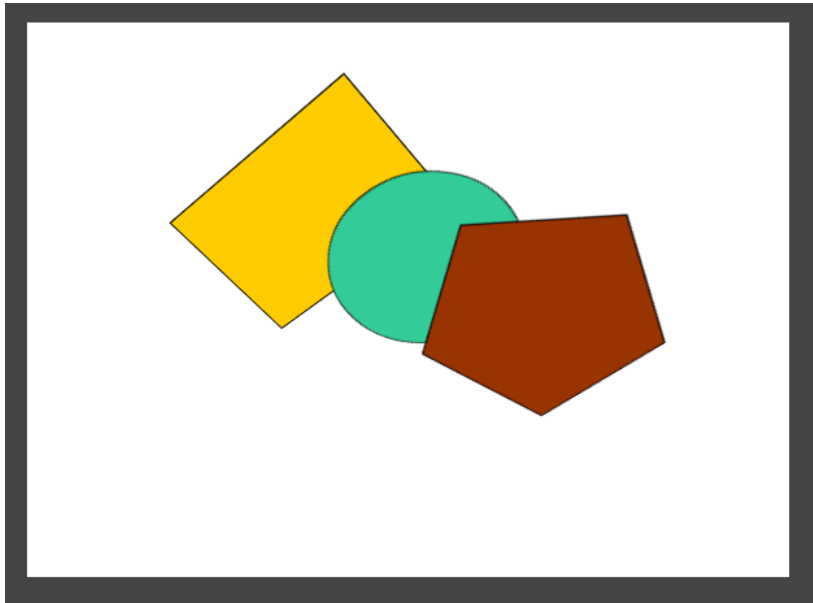
- 3D Translation:
  - Must be Movie Clip Instances
  - Must use Motion Tweening
  - Z Axis;
    - (- ) Minus Number brings forward
    - Positive Number sends Back



# 3D Translation



# 3D Translation



Z Axis

Rectangle = 100

Circle = 0

Pentagon = -100