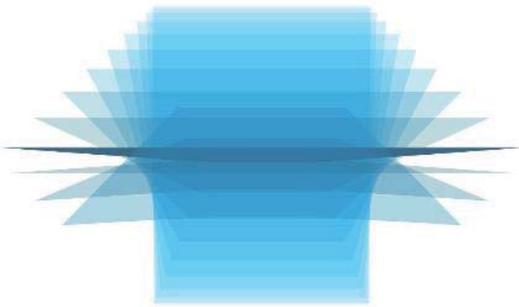
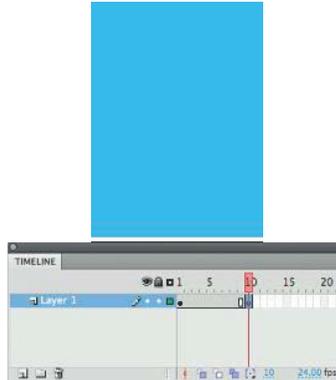


2 Transformation and distortion

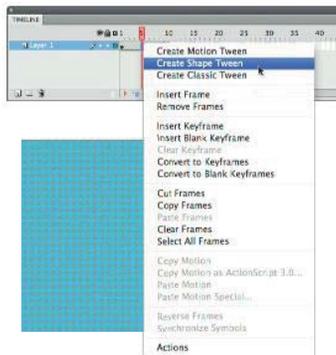
Card flip



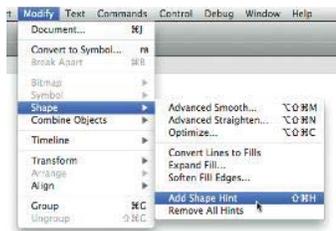
A POPULAR ANIMATION REQUEST requested on the Flash public forums is how to animate a flat card rotating or flipping 360 degrees. What makes this animation difficult for many to understand is the approach to actually making it. It is easy to assume, since Flash is a two-dimensional program, adding a third dimension simply is not possible unless the object is redrawn manually one frame at a time. But with Flash, it's all in the approach, and it doesn't have to be taken literally. Two dimensions are plenty to work within for this animated effect.



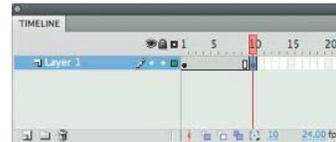
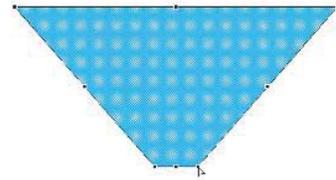
1 Start with a simple rectangle with no stroke around it. Add a second keyframe on frame 10. Select the Free Transform tool **Q** and then the Distort subselection tool.



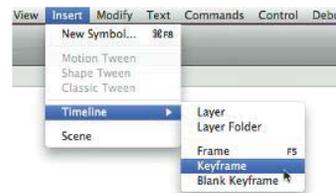
5 In Flash CS5 you have the ability to apply a Shape tween from the context menu in the timeline. So go ahead and apply one.



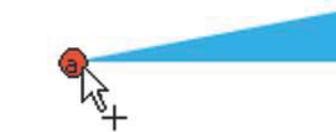
10 Let's add some shape hints to correct the problem. Select the first frame in the faulty tween and then go to **Modify > Shape > Add Shape Hint** **⌘ Shift H** **ctrl Shift H**.



2 Hold down the **Shift** key and pull a top corner point away from the shape. With the **Shift** key still pressed, pull a bottom corner in the opposite direction.

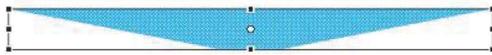


6 Now that you have the first half of the animation, you need to create the second half. Select frame 11 and insert a keyframe.



11 Drag the red "a" hint to one of the corners of your shape until it snaps.

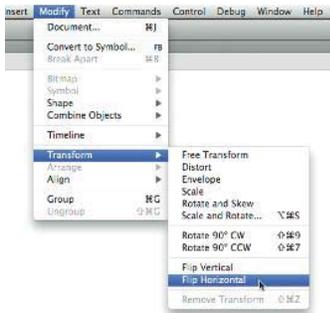
How to Cheat in Flash



3 Click outside the shape to end the transformation. Select it again, hold down the **Shift** key and drag the bottom middle handle upward. The **Shift** key will constrain the shape vertically.



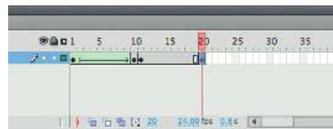
4 Turn on the Onionskin tool so you can see the previous frame. Position the newly transformed shape so that it is centered over the original shape seen through the onionskin.



7 Modify the shape in frame 11 by flipping it vertically.



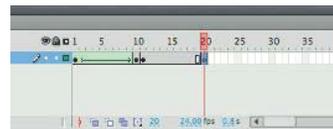
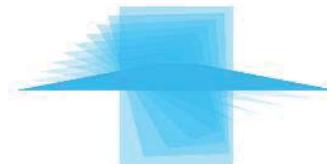
12 Go to the last keyframe in your tween and drag the green "a" hint to the same respective corner. Repeat this procedure again for the opposite corner.



8 Select the keyframe in frame 1 and copy the frame **⌘** **⌘** **C**. Next, select frame 20 and paste the frame **⌘** **⌘** **V**.



13 The final visual effect is to mix a slightly darker version of the color of the card and then use it to fill the shapes in frames 10 and 11.



9 Apply a Shape tween to the latter half of your frames. You may experience a misbehaving tween like I did when writing this topic. Let's fix it.



14 The card will not only tween its shape, but also its color from light to dark. This color change makes for a convincing three-dimensional effect.



HOT TIP

While writing this topic, I experienced a common weakness with Shape tweens in Flash. Due to the nature of vectors and how Flash tries to calculate what it thinks you want to achieve, sometimes the tween implodes or twists in ways we never anticipated. Shape hints exist for this very reason and they are easy to learn about in the Flash Help docs. An alternative solution for this example would be to convert frames 1-10 to keyframes, copy and paste them in frames 11-20 and then reverse them.

SHORTCUTS

MAC WIN BOTH