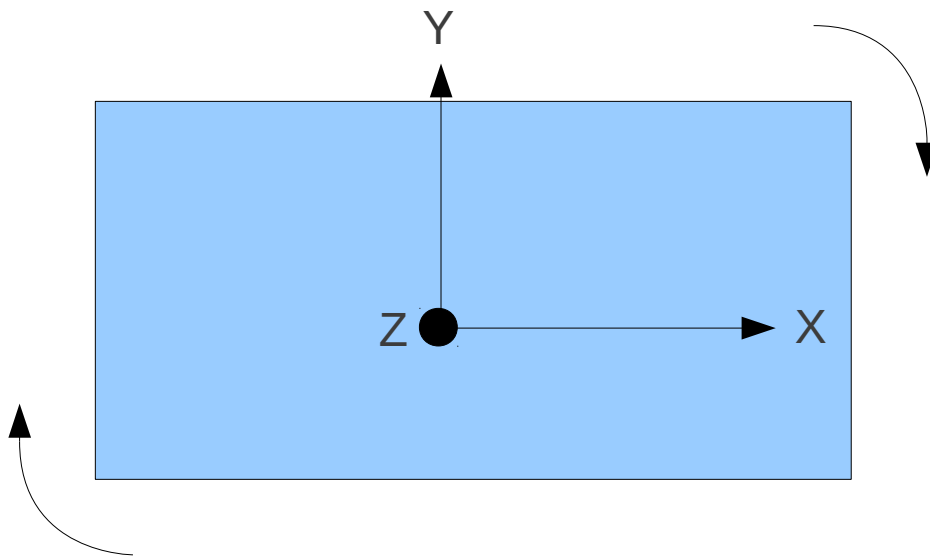
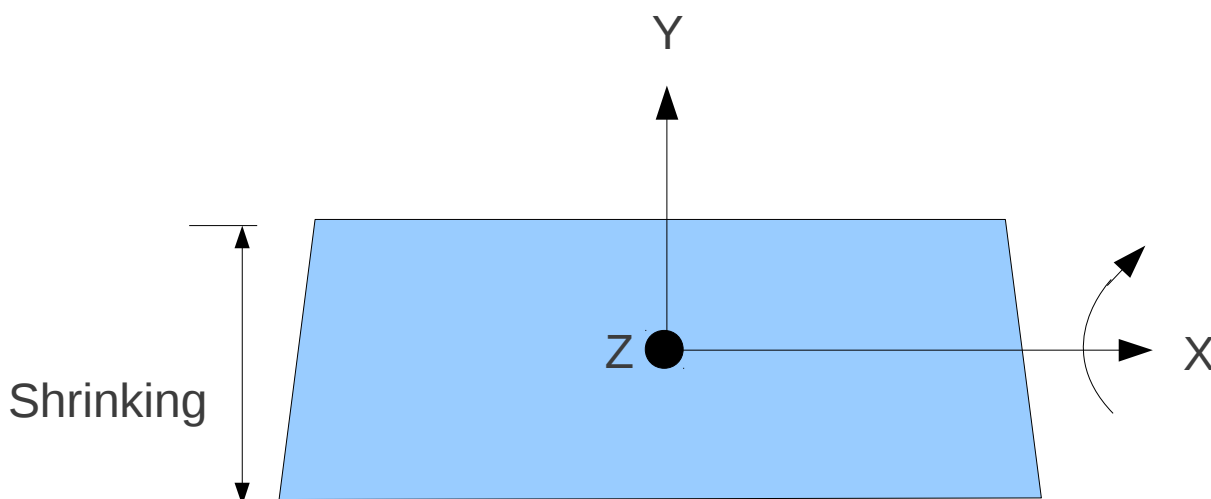


Typical image rotation around Z axis, at the centre of the image.
The image size remains the same.



'**Out-of-plane**' rotation is around X or Y axis, think of the image in 3D space. It will appear to '**shrink**' either in the X or Y axis, with a bit of perspective distortion. We will assume the perspective distortion can be ignored, if the object is far away from the camera.

Example below is rotation around the X axis.



An example. If you rotate around the X axis by 60 degrees, the image will appear to have shrink vertically by 50%. Because $\cos(60 \text{ degrees}) = 0.5$.