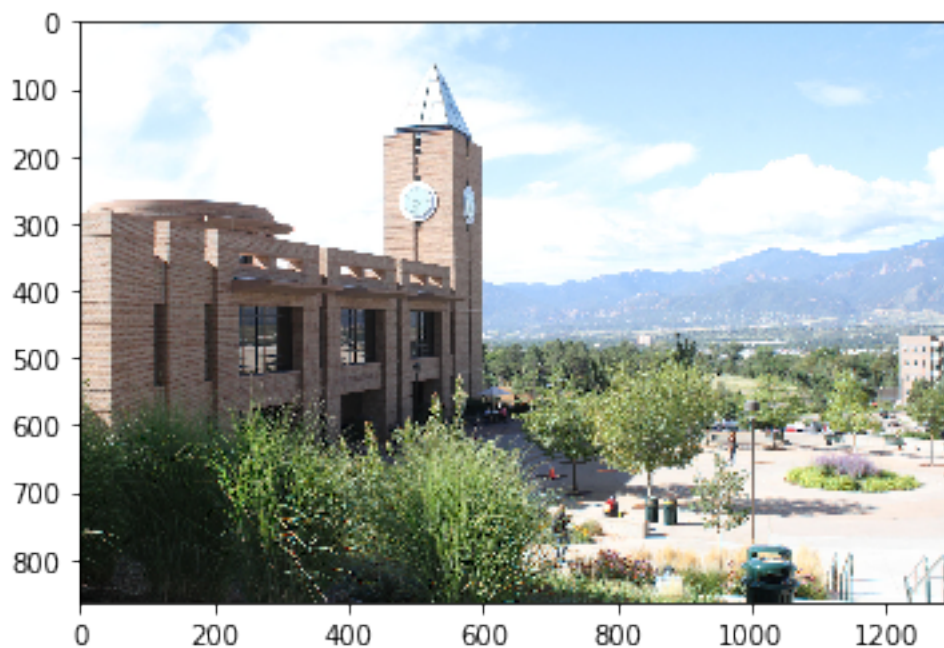
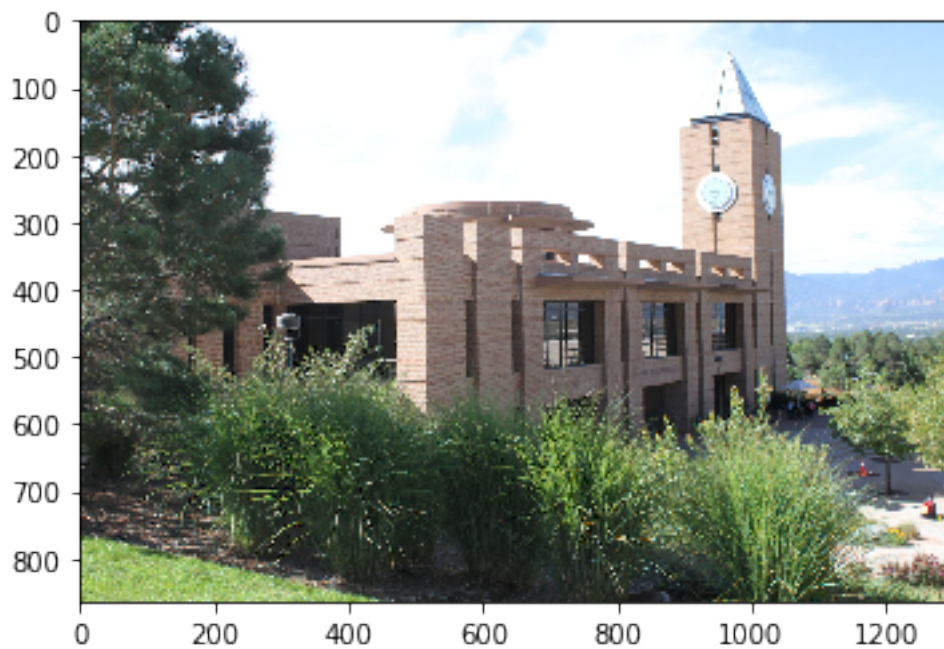


## Step 1: Read in images pano1.jpg and pano2.jpg and show them

Leave them as color (three-channel) images.

Note that OpenCV reads images as BGR while Matplotlib wants RGB.



**Coordinates for 2D points are given here.**

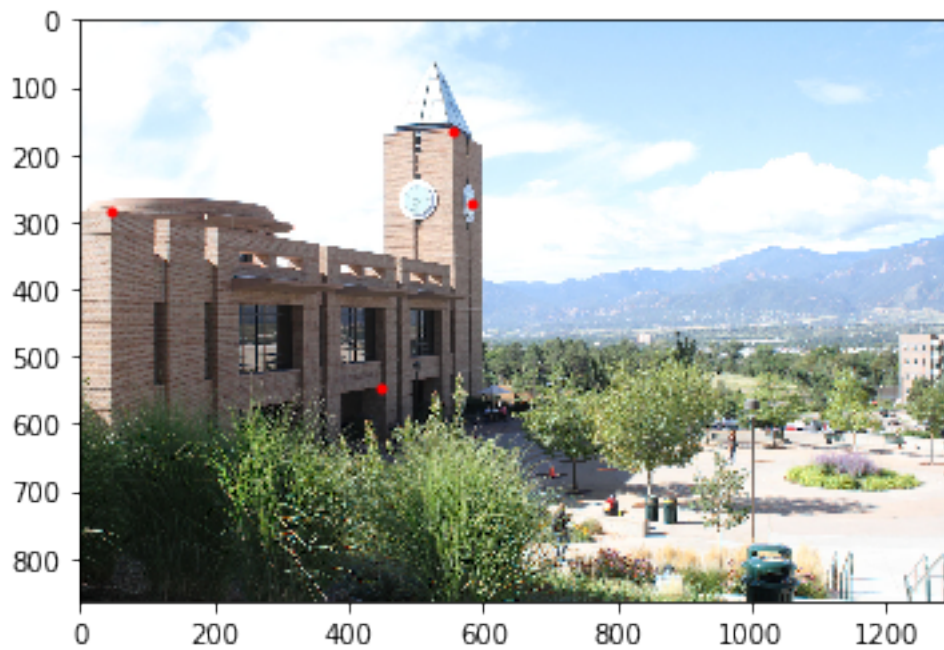
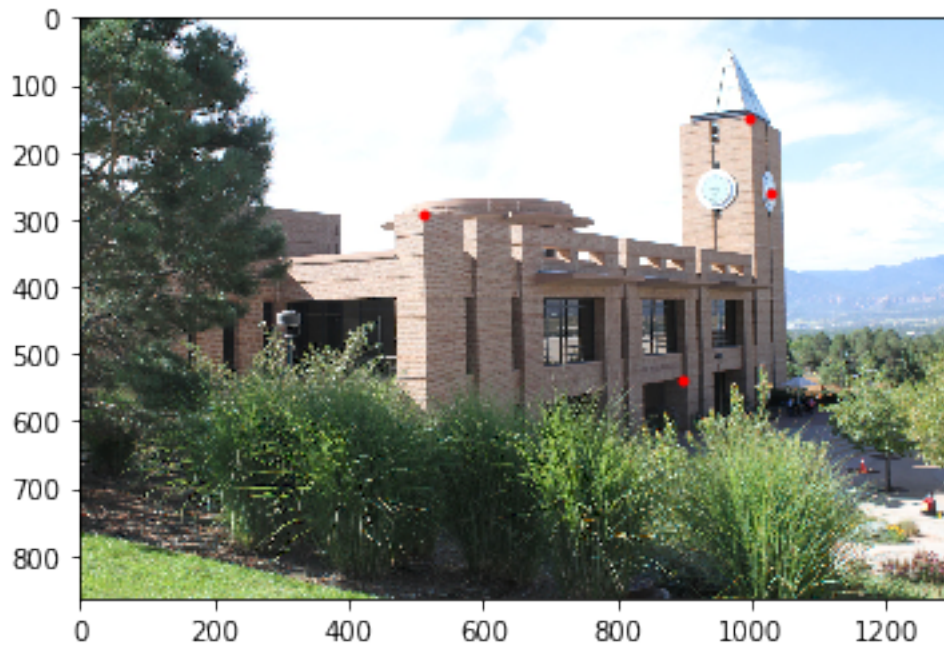
Points in first image:

```
[[ 512.   997.  1028.   898.]  
 [ 291.   149.   259.   537.]]
```

Points in first image:

```
[[ 48.  557.  582.  449.]  
 [ 284.  164.  274.  545.]]
```

**Step 2: Show each image and plot the points on top as red dots.**



**Step 3: Use the Direct Linear Transform to solve for the 3x3 homography relating the two point sets.**

See the accompanying PDF for information on this.

```
[[ 7.56638323e-01  -4.62358888e-04  4.66168156e+02]  
 [-9.03489041e-02   8.90745767e-01  3.68833993e+01]  
 [-1.86879358e-04  -3.47420198e-05  1.00000000e+00]]
```

## Step 4: Calculate the average re-projection error of the estimated homography.

See the accompanying PDF for information on this.

$2.20295632394e-11$

## Step 6: Warp image 2 using the homography and blend the result with image 1.

Use a linear blend with a weight of 0.5 for each image.

