

머신비전시스템 과제1

지능기전공학부 스마트기기공학과

18011789

조혜수

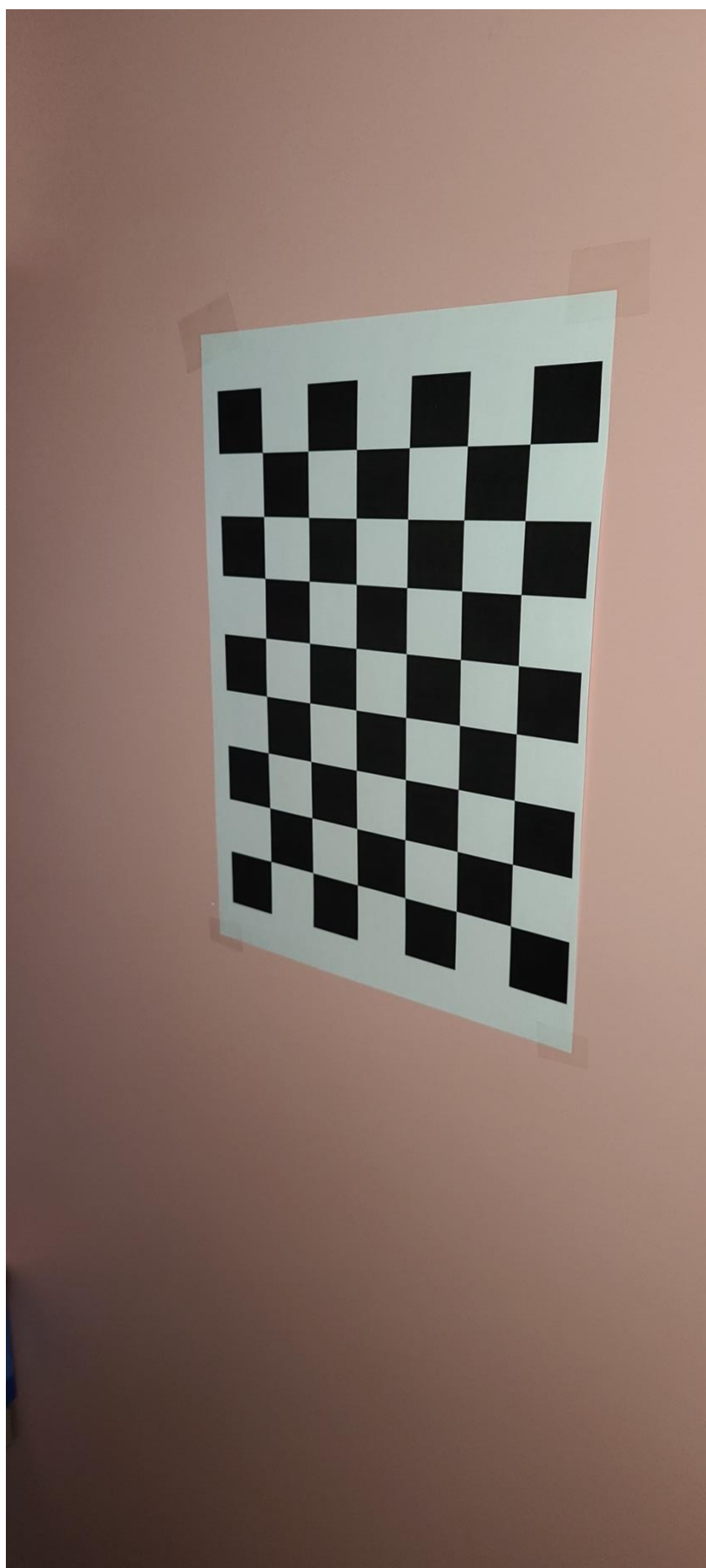
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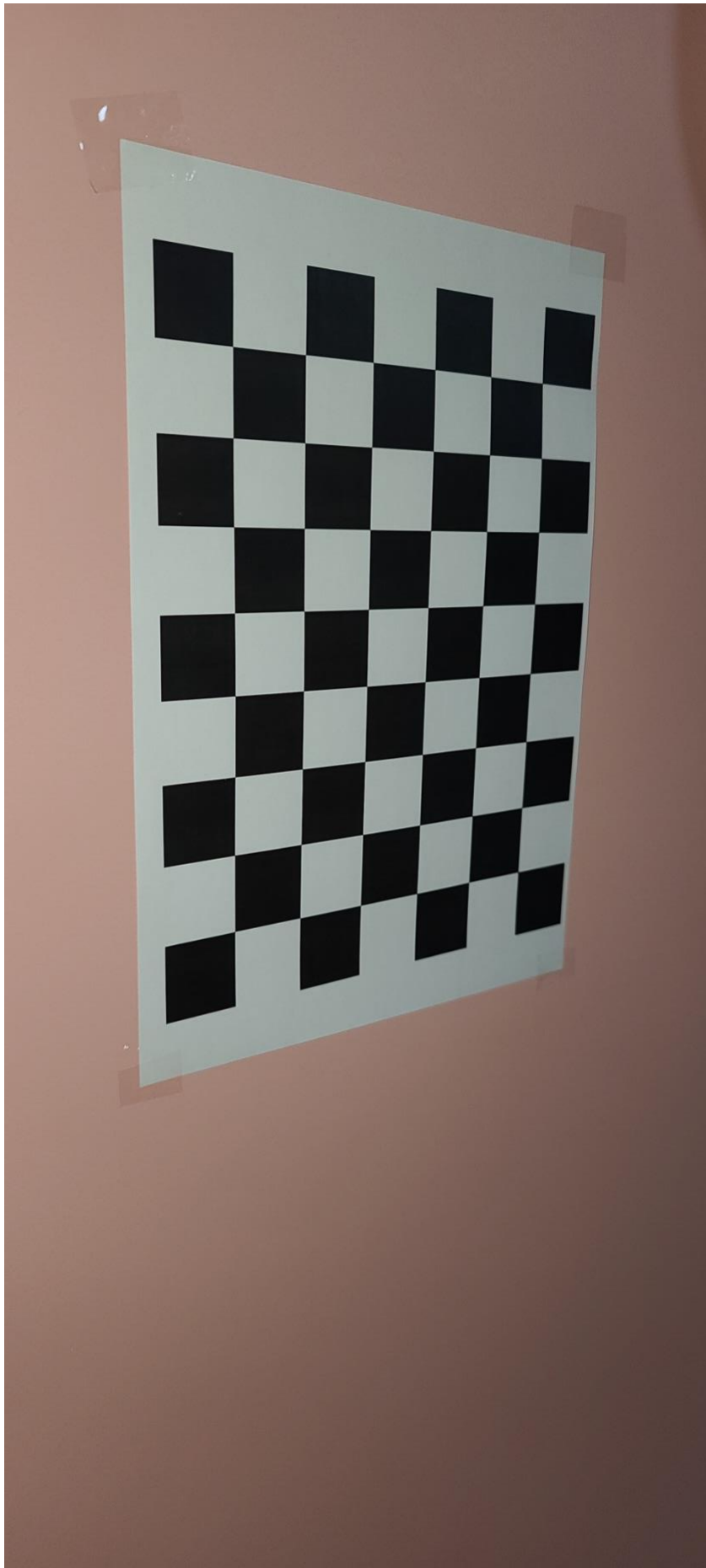
1. Checkboard 파일 (실제 물체)

http://www.vision.caltech.edu/bouguetj/calib_doc/htmls/pattern.pdf

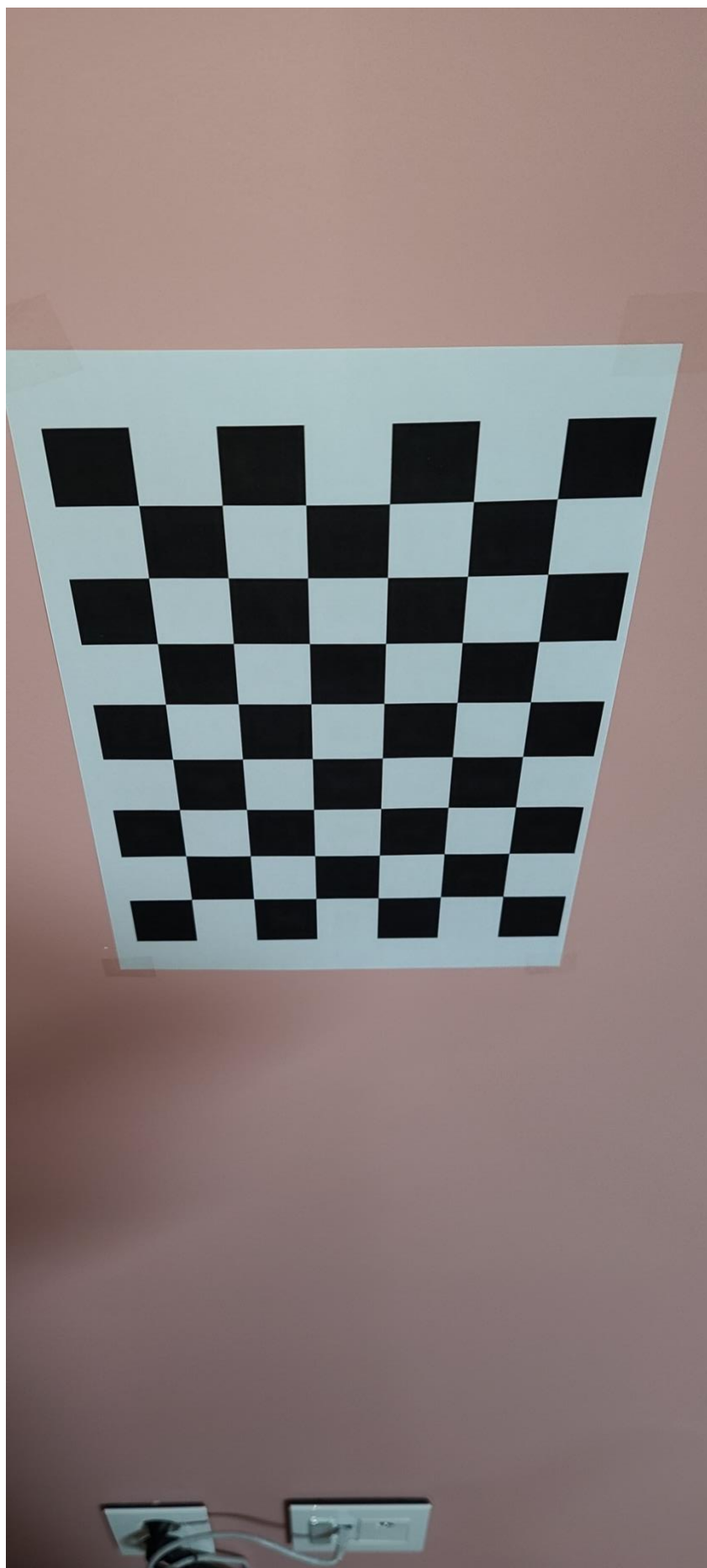
2. 찍은 사진 (10장)

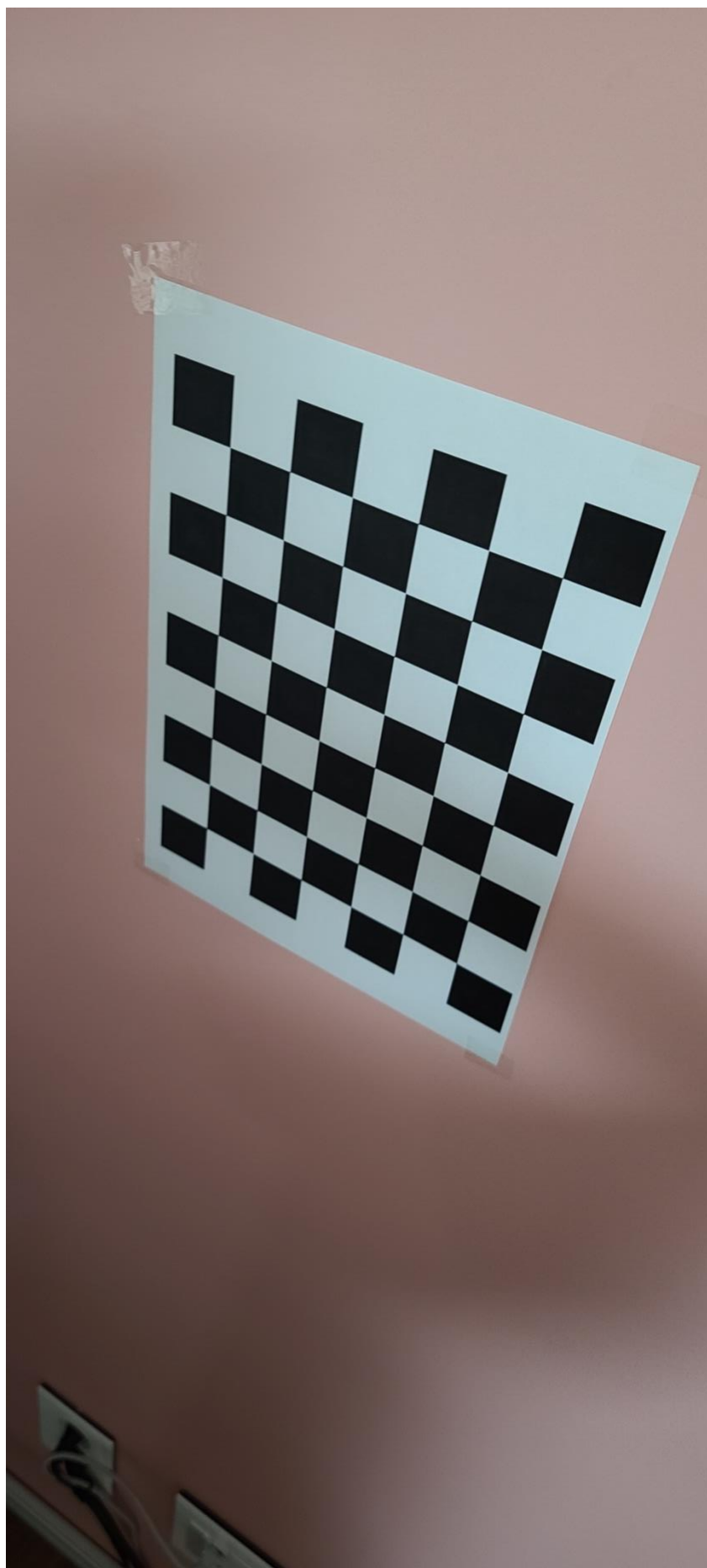


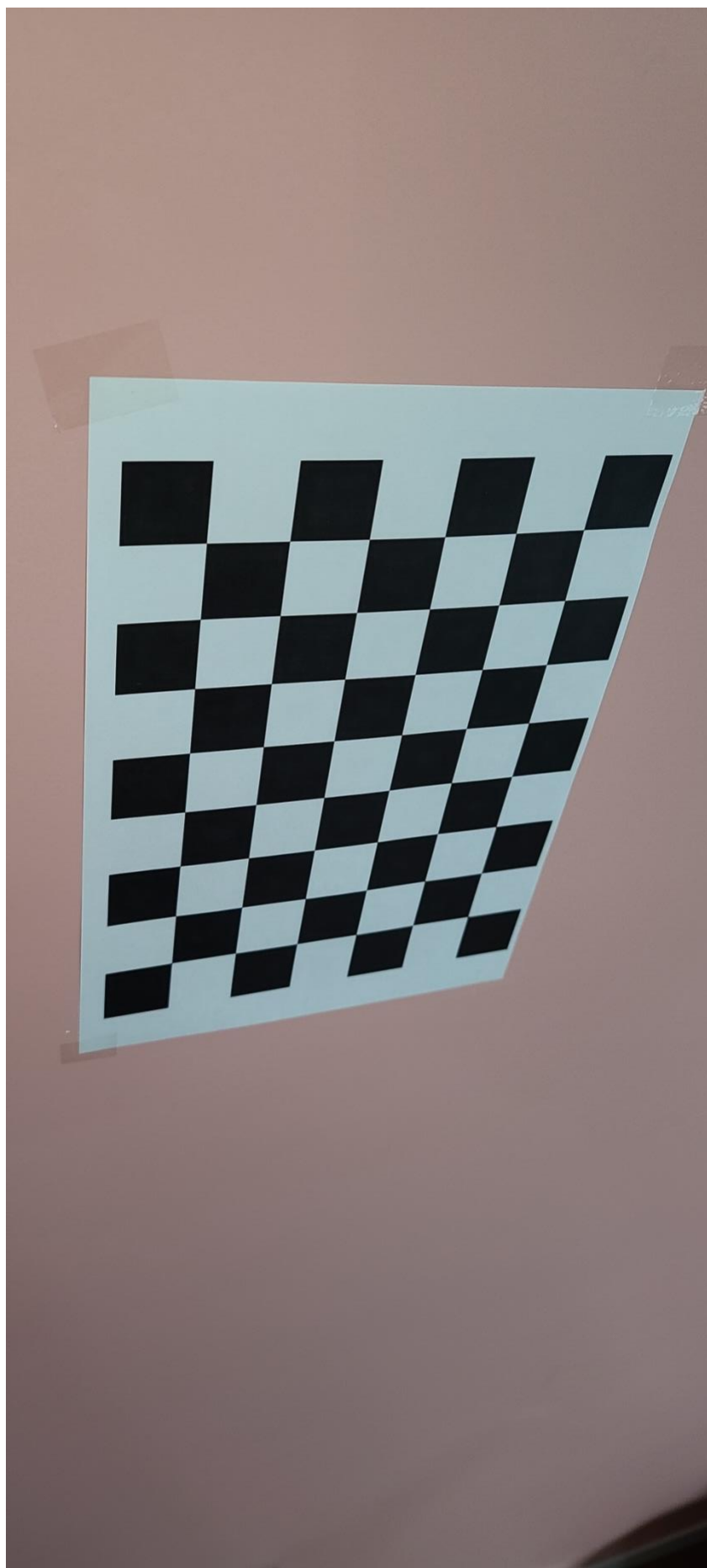


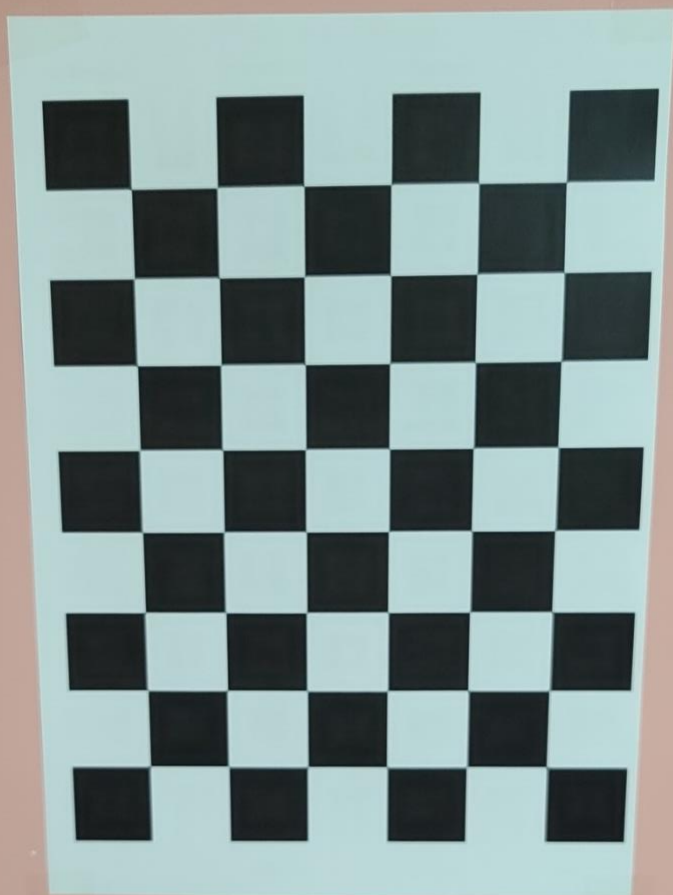


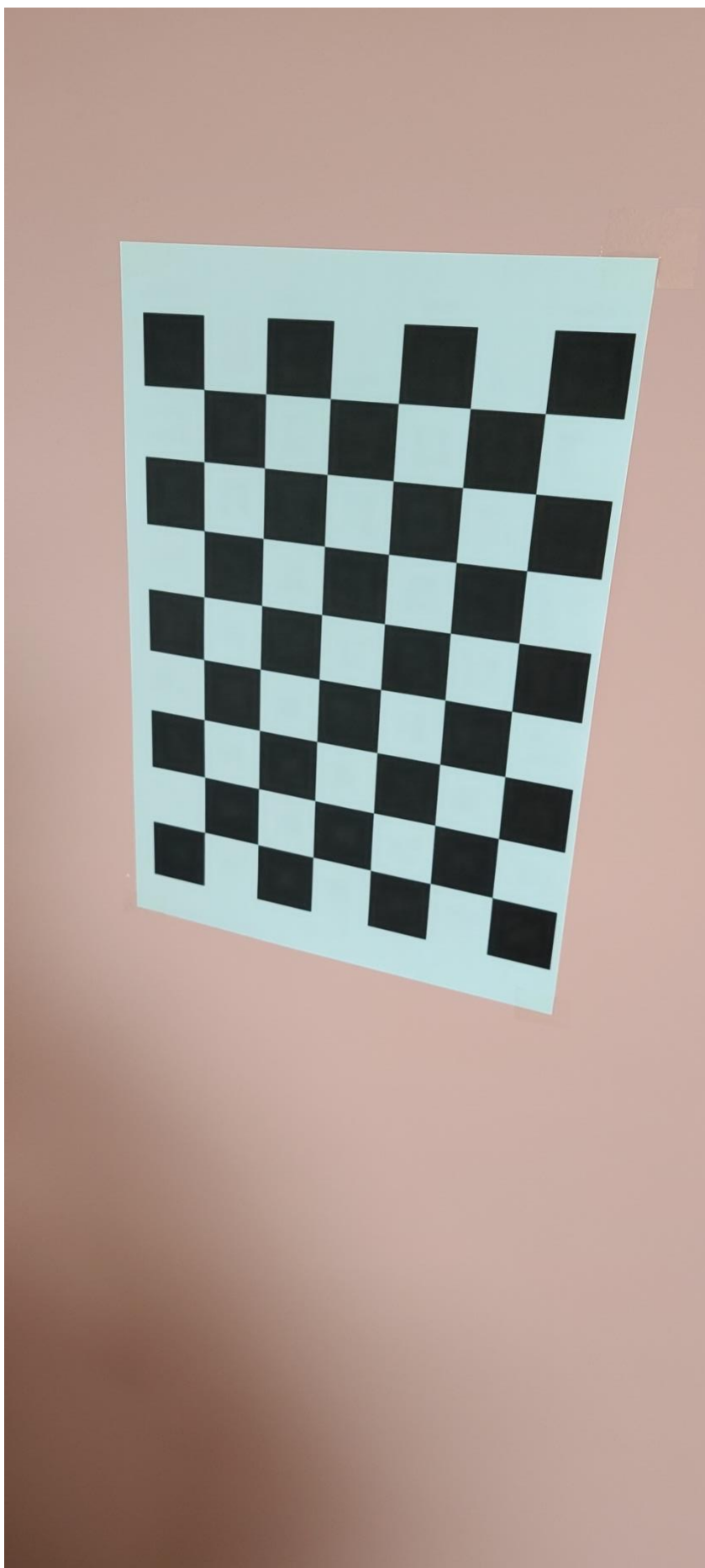












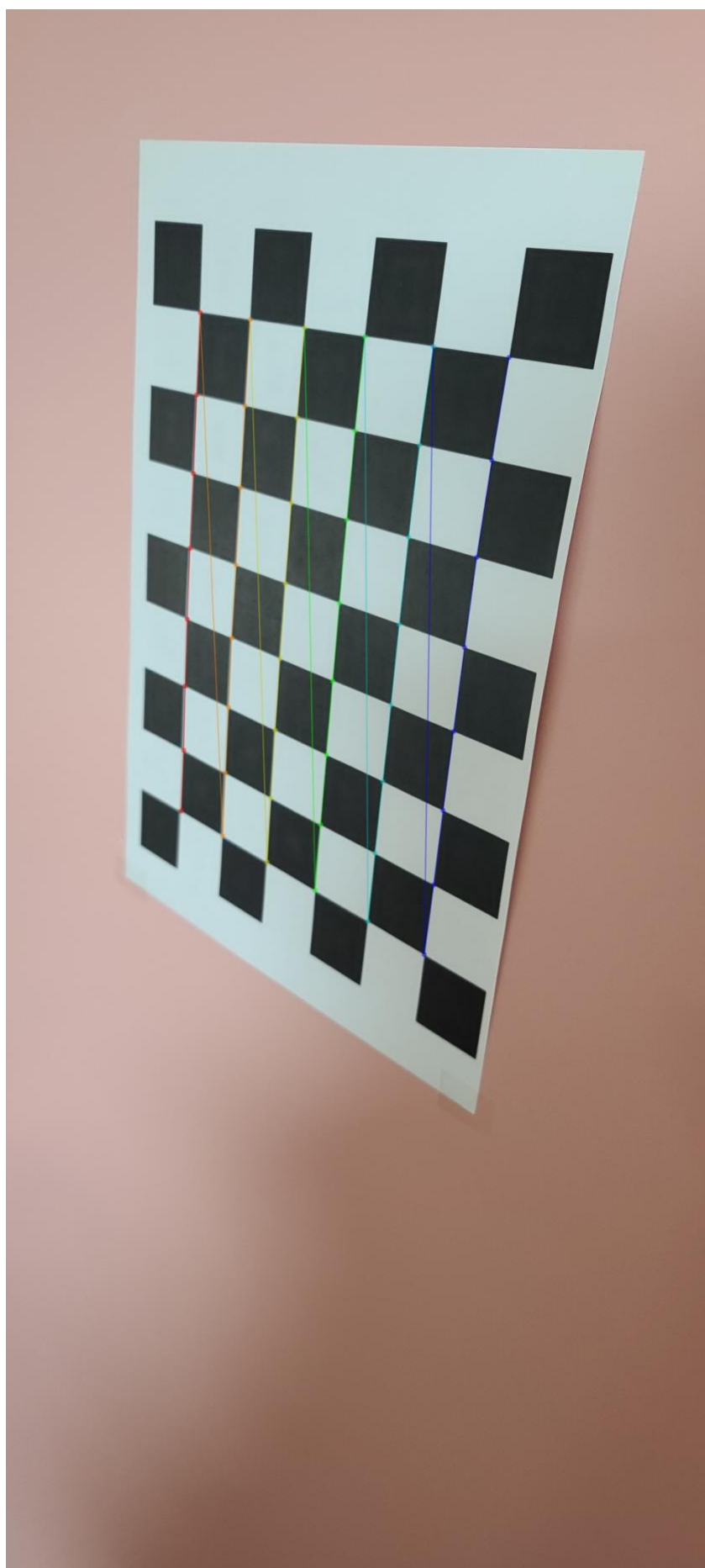


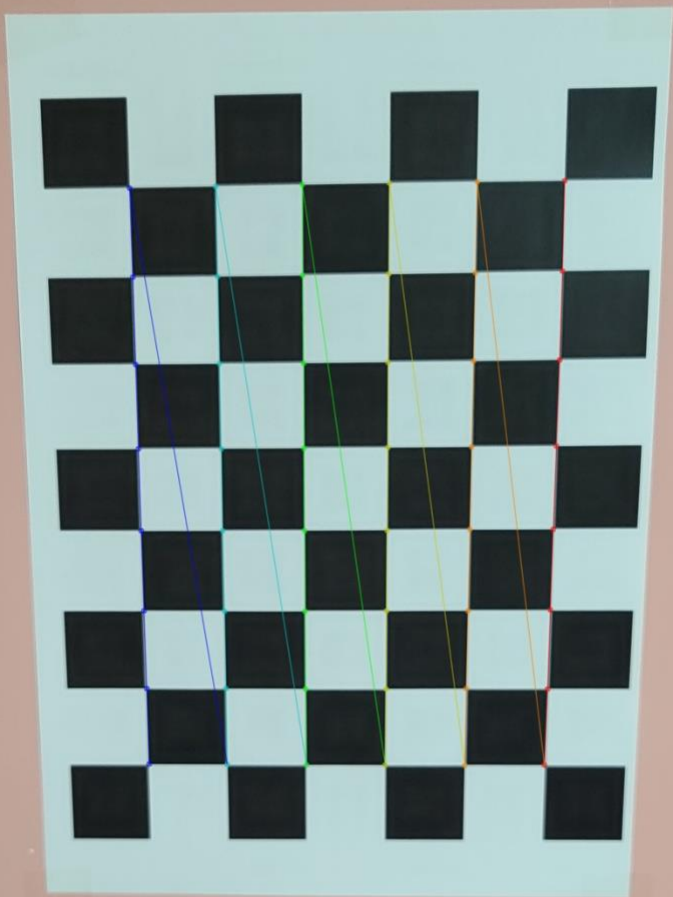
3. 코드 수정 부분

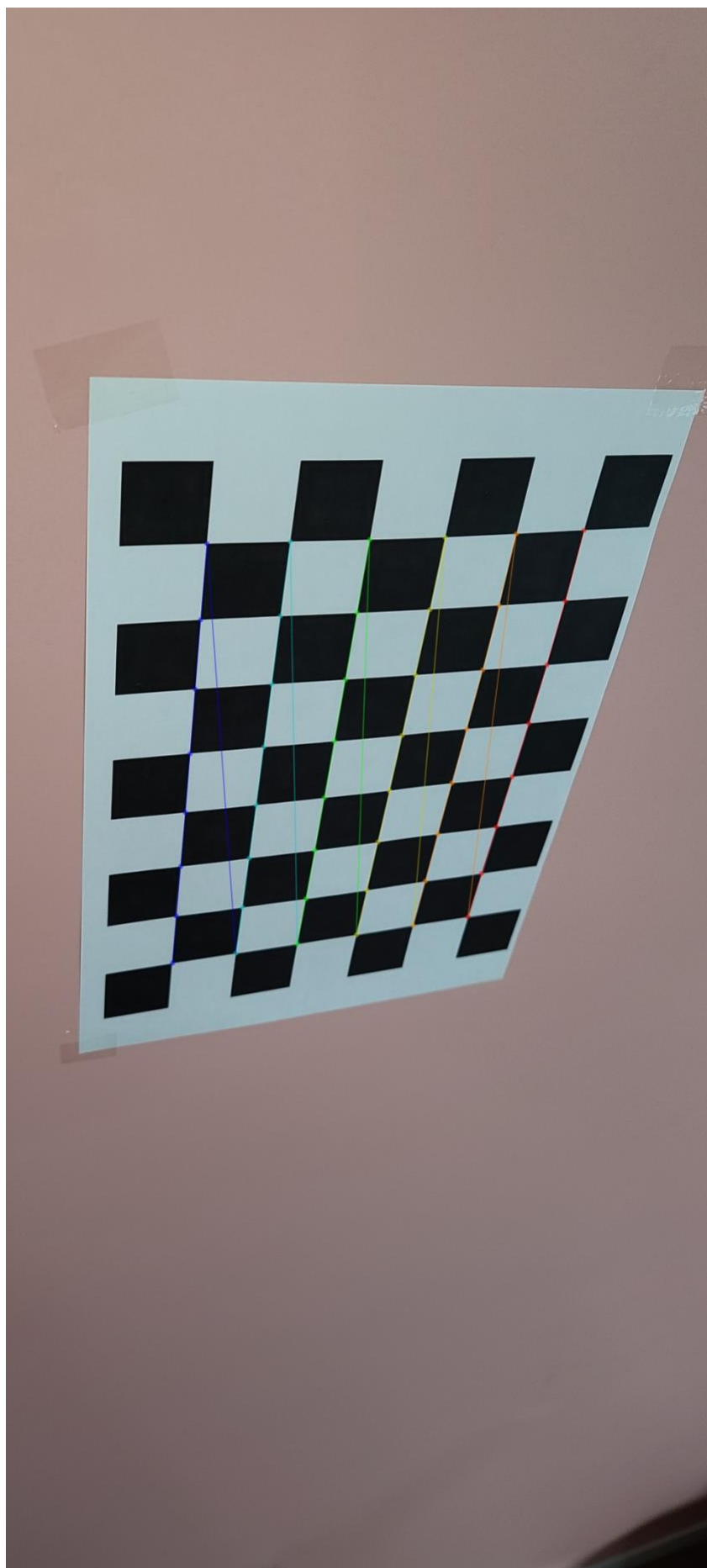
```
objp = np.zeros((6*8,3), np.float32)
objp[:,2] = np.mgrid[0:8,0:6].T.reshape(-1,2)
images=glob.glob('/content/gdrive/MyDrive/MachineVision/KakaoTalk_Photo_2022*.jpeg')

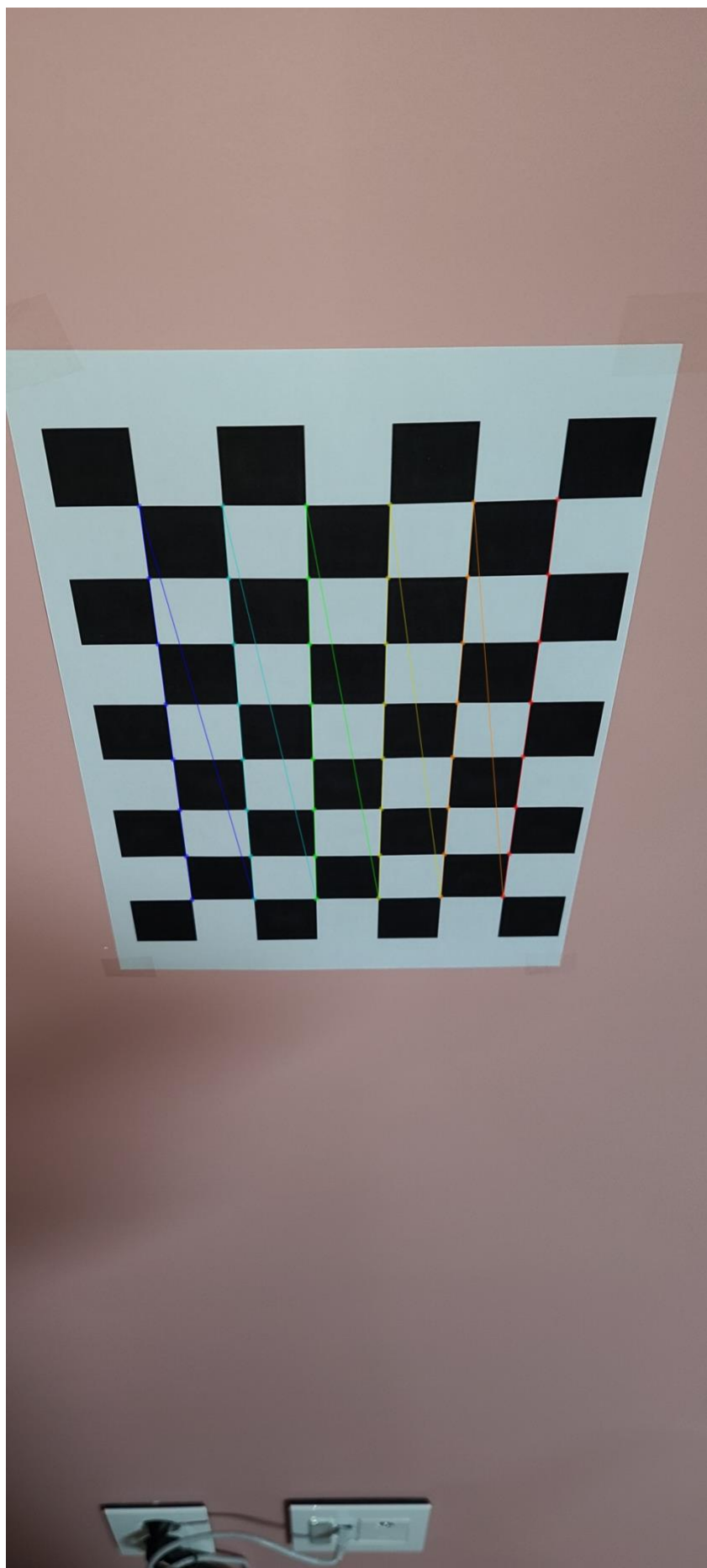
ret, corners = cv.findChessboardCorners(gray, (8,6), None)
cv.drawChessboardCorners(img, (8,6), corners2, ret)
```

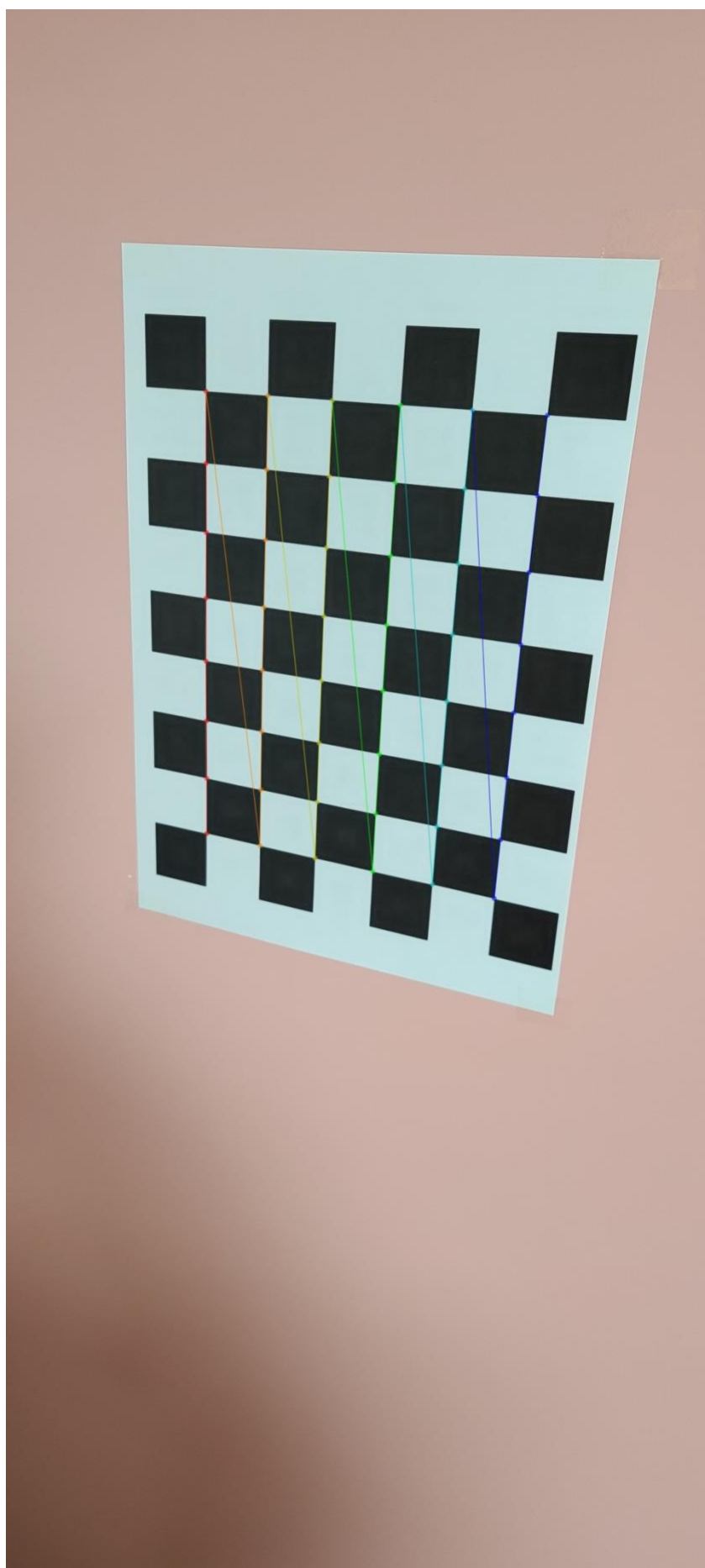
4. 코너 검출 그림

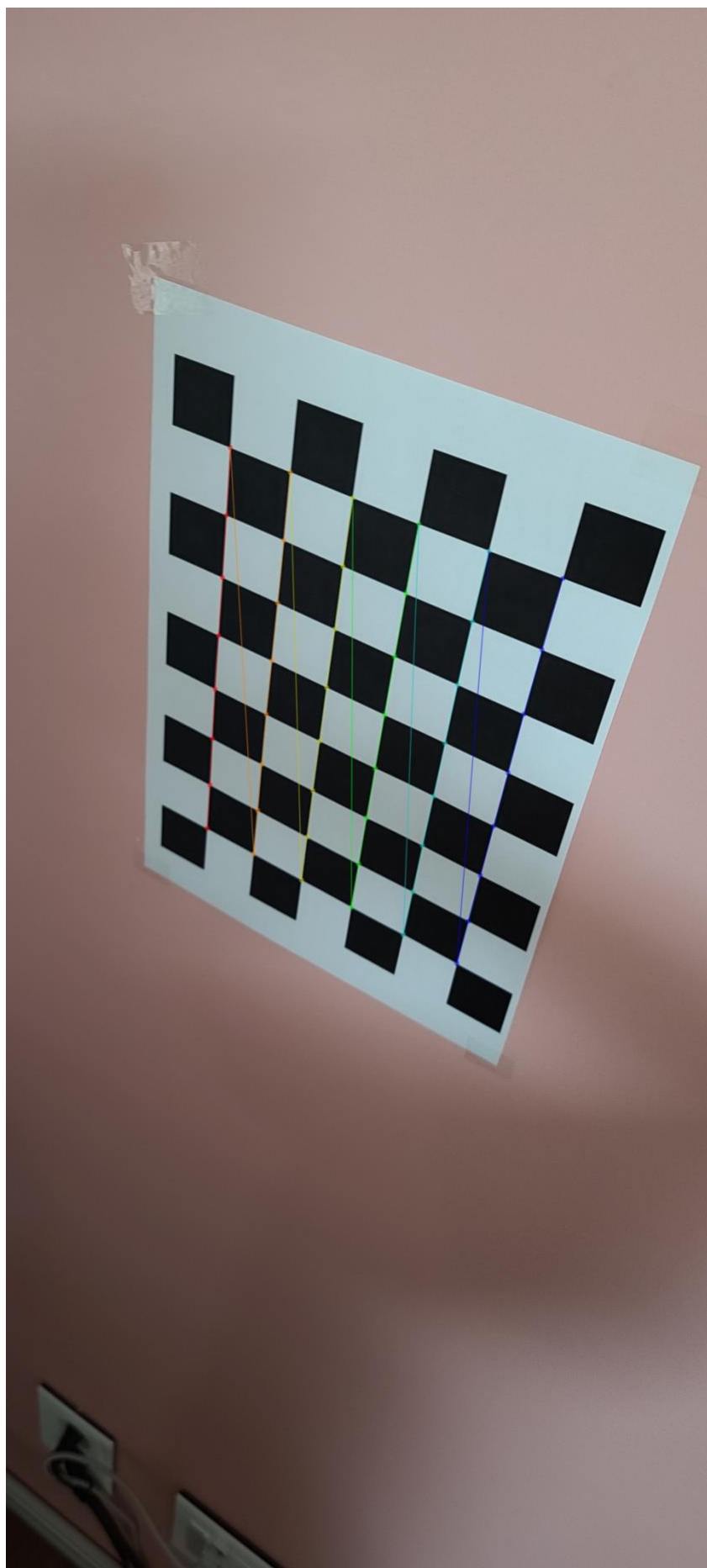




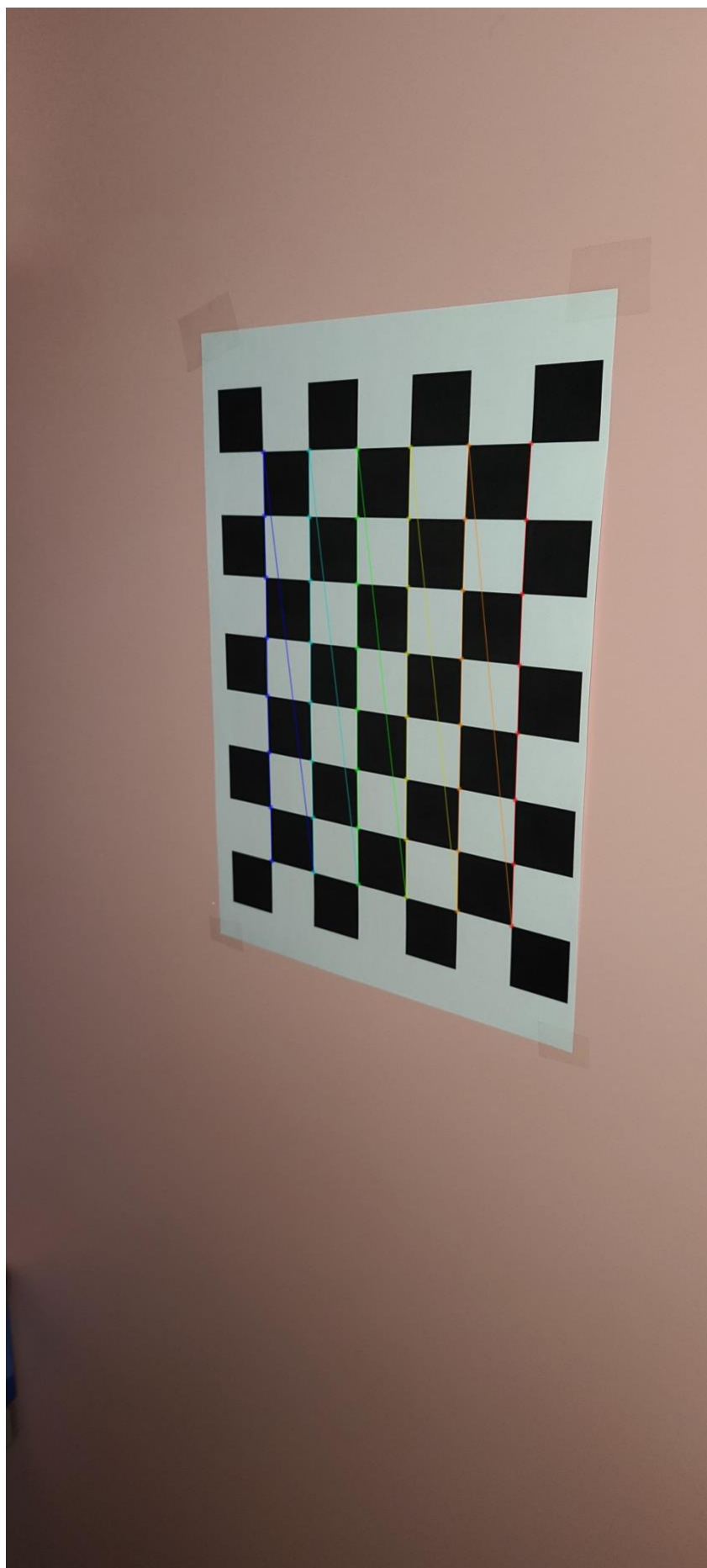


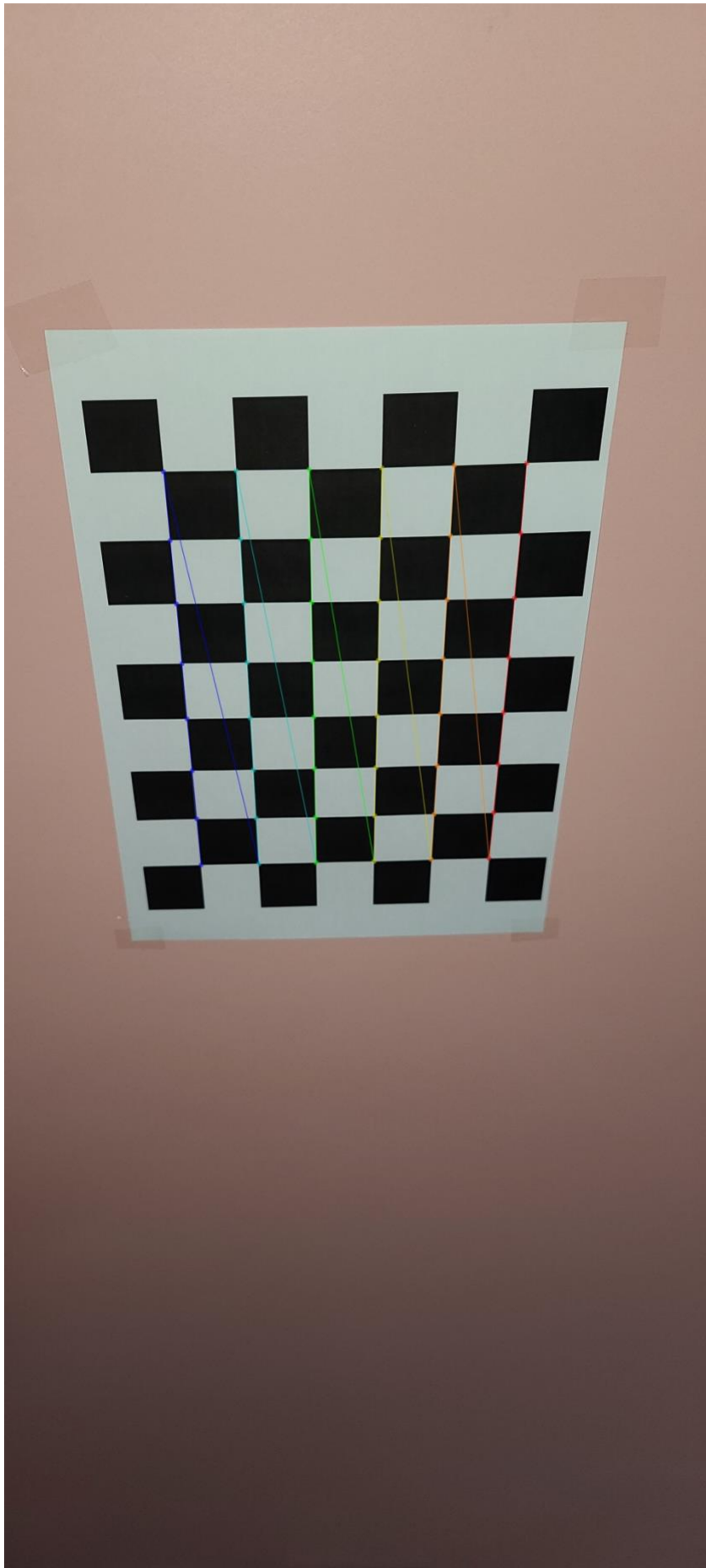















5. 카메라 내부/ 외부 변수 mtx, rvecs, tvecs

[5] mtx

```
array([[2.96065168e+03, 0.00000000e+00, 8.48964651e+02],
       [0.00000000e+00, 2.95449191e+03, 1.94082167e+03],
       [0.00000000e+00, 0.00000000e+00, 1.00000000e+00]])
```

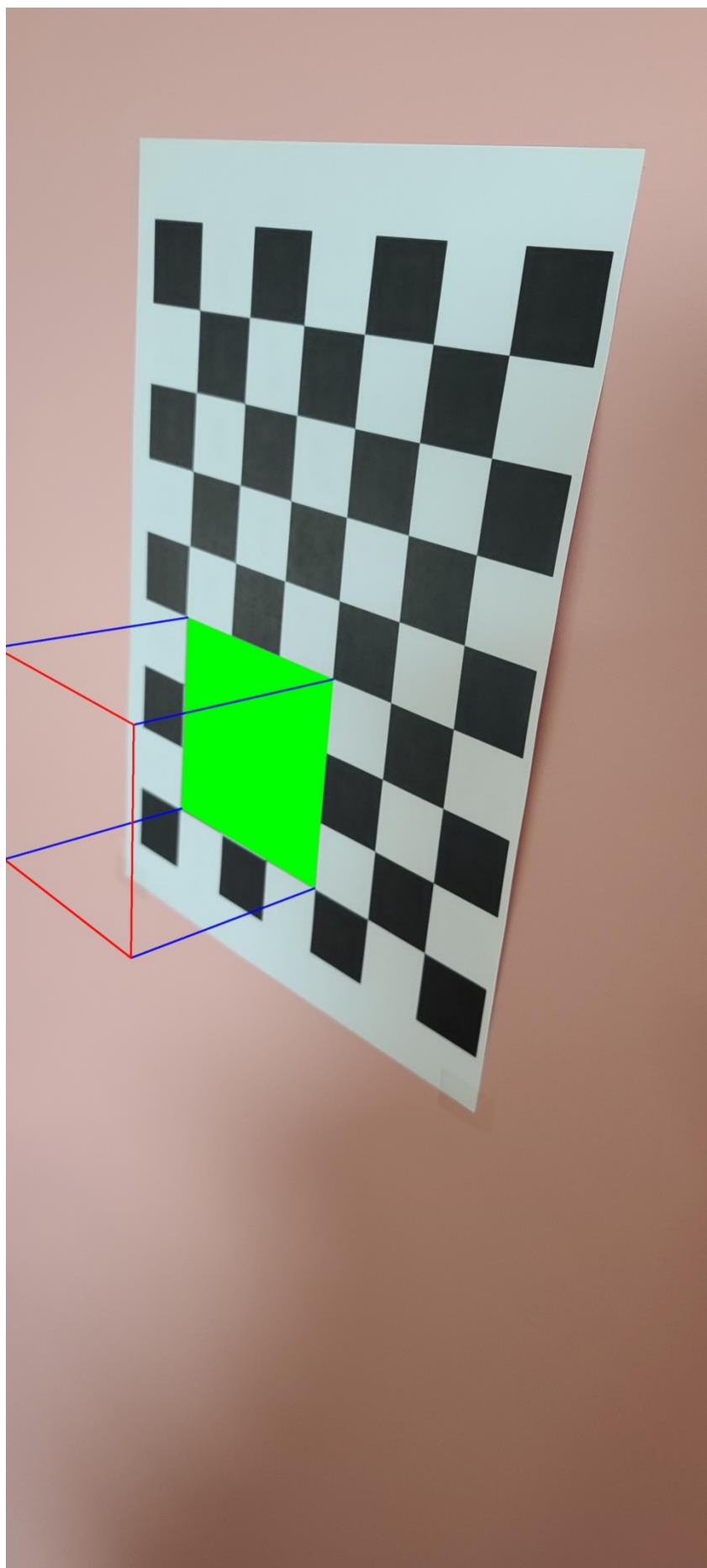
 rvecs

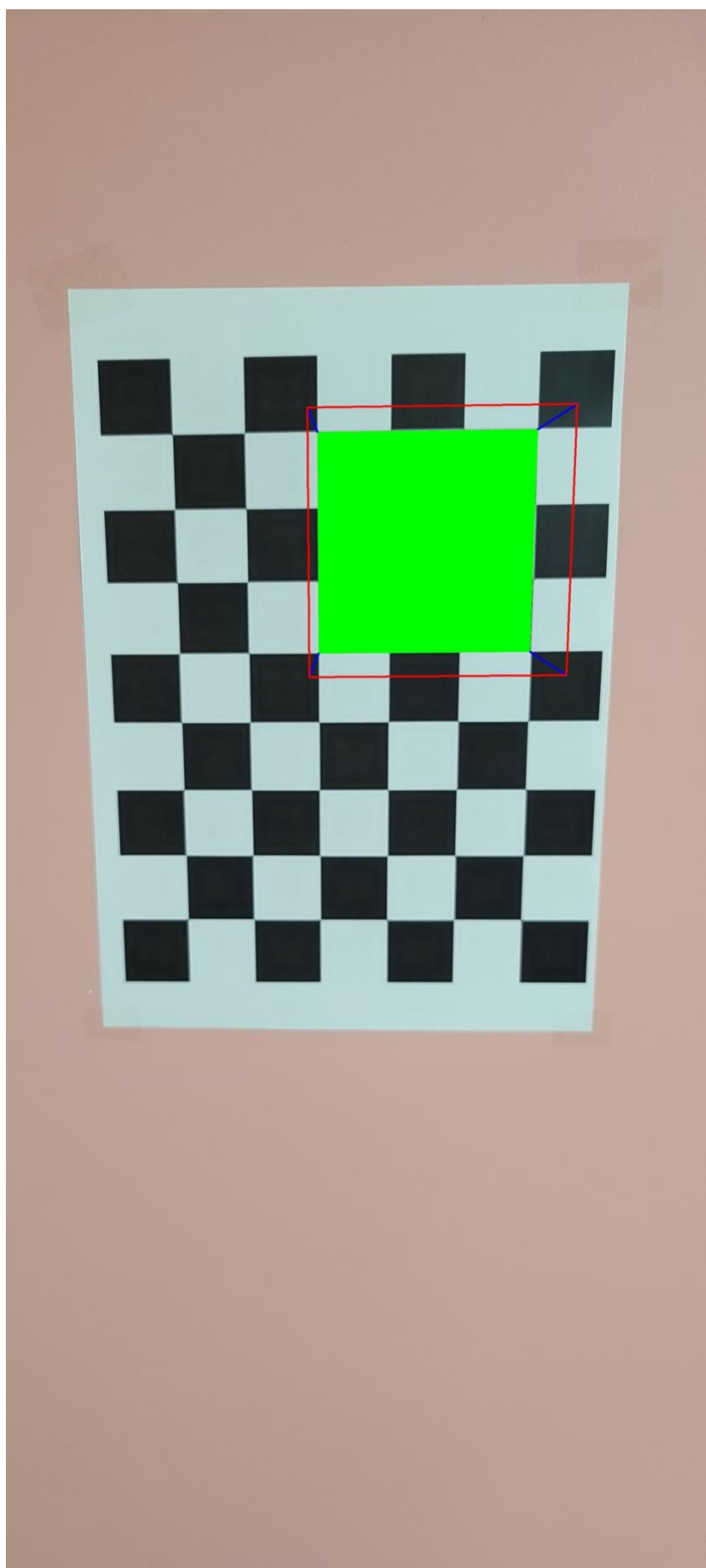
```
[> [array([[-0.3253887 ],
          [ 0.84766063],
          [-1.22821035]]), array([[ 0.16630135],
          [-0.13314928],
          [ 1.56244082]]), array([[ 0.23001208],
          [-0.8185857 ],
          [ 1.51466536]]), array([[ 0.56135477],
          [-0.56940023],
          [ 1.48871526]]), array([[ -0.02984525],
          [ 0.58531119],
          [-1.41330006]]), array([[ 0.08670097],
          [ 0.85309401],
          [-1.179276  ]]), array([[ -0.20152643],
          [ 0.41496475],
          [ 1.55600403]]), array([[0.73865837],
          [0.36949434],
          [1.56981418]]), array([[ 0.45155712],
          [-0.49580548],
          [ 1.50507097]]), array([[ -0.34257084],
          [-0.63471073],
          [ 1.46524942]])]
```

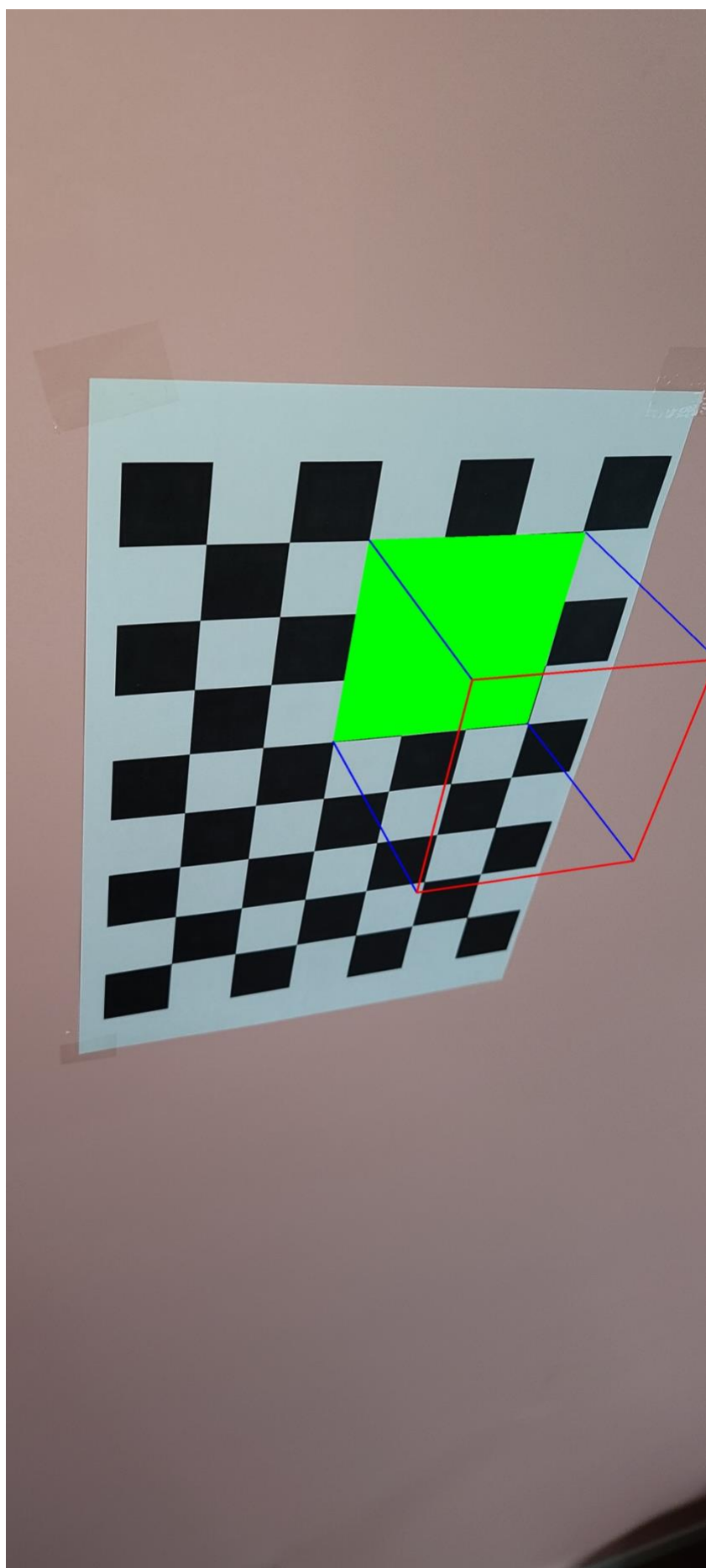

tvecs

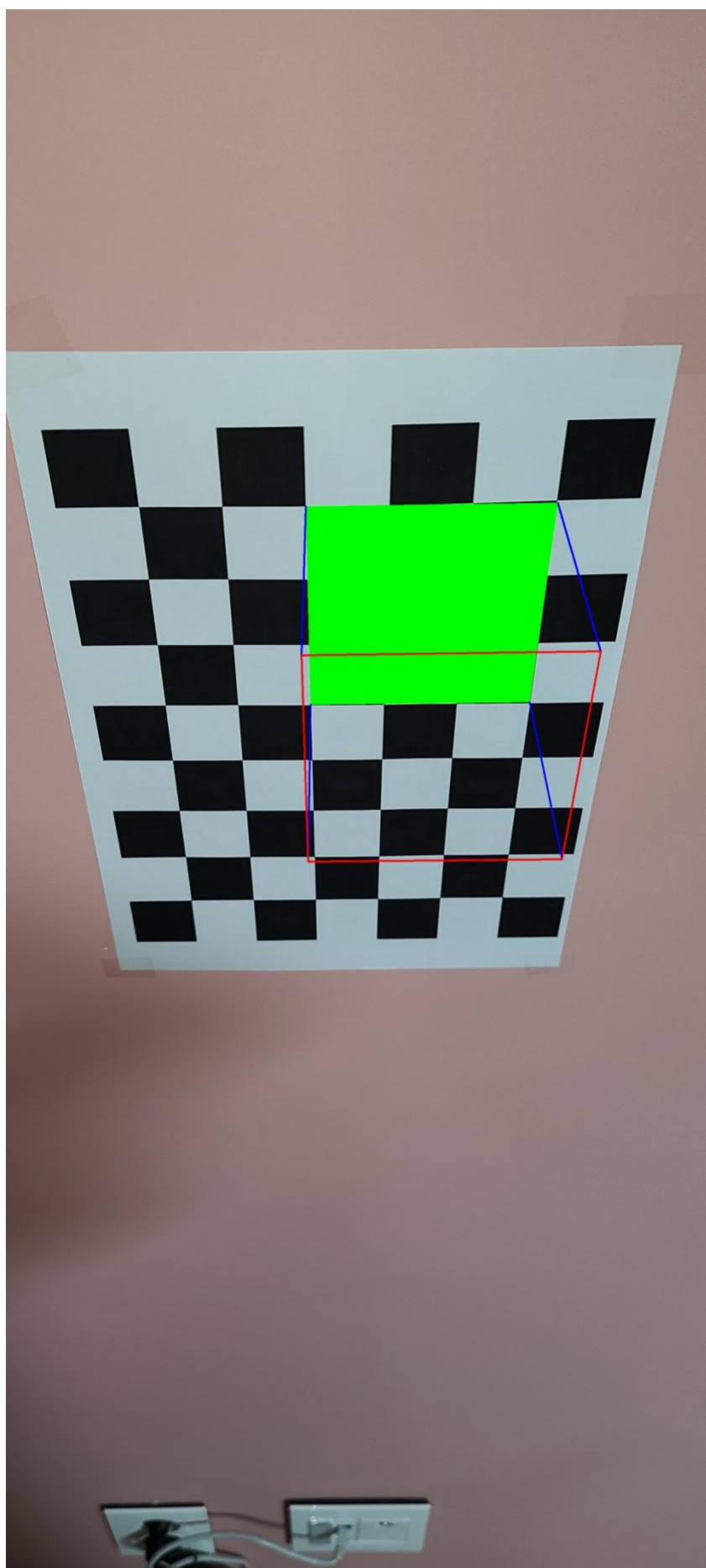
```
[array([-2.3934391 ],
       [ 0.63881416],
       [17.62156428])], array([[ 2.71291593],
       [-4.58784593],
       [15.96173374])], array([[ 3.17095918],
       [-2.99873748],
       [14.98710717])], array([[ 2.61351921],
       [-3.14418361],
       [13.94232891])], array([[ -2.20765732],
       [ 1.10162864],
       [19.41056403])], array([[ -2.29588484],
       [ 1.0822884 ],
       [20.27286829])], array([[ 3.01052862],
       [-6.76065756],
       [16.76884983])], array([[ 2.57056268],
       [-4.36688973],
       [15.8918777 ]]), array([[ 2.59905003],
       [-4.11594023],
       [16.19248075])], array([[ 2.85902276],
       [-5.24382378],
       [16.26956151]])]
```

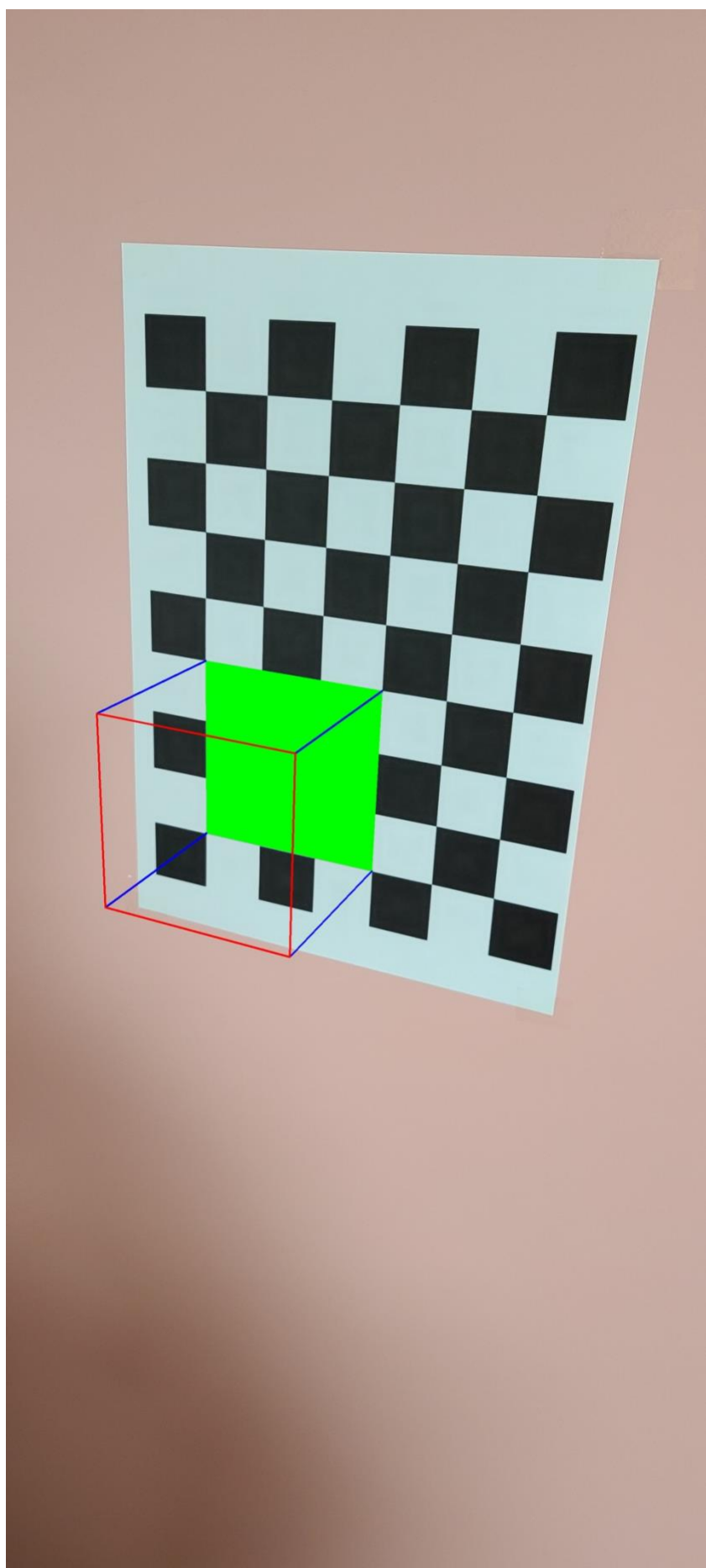
6. 직육면체 투영된 영상

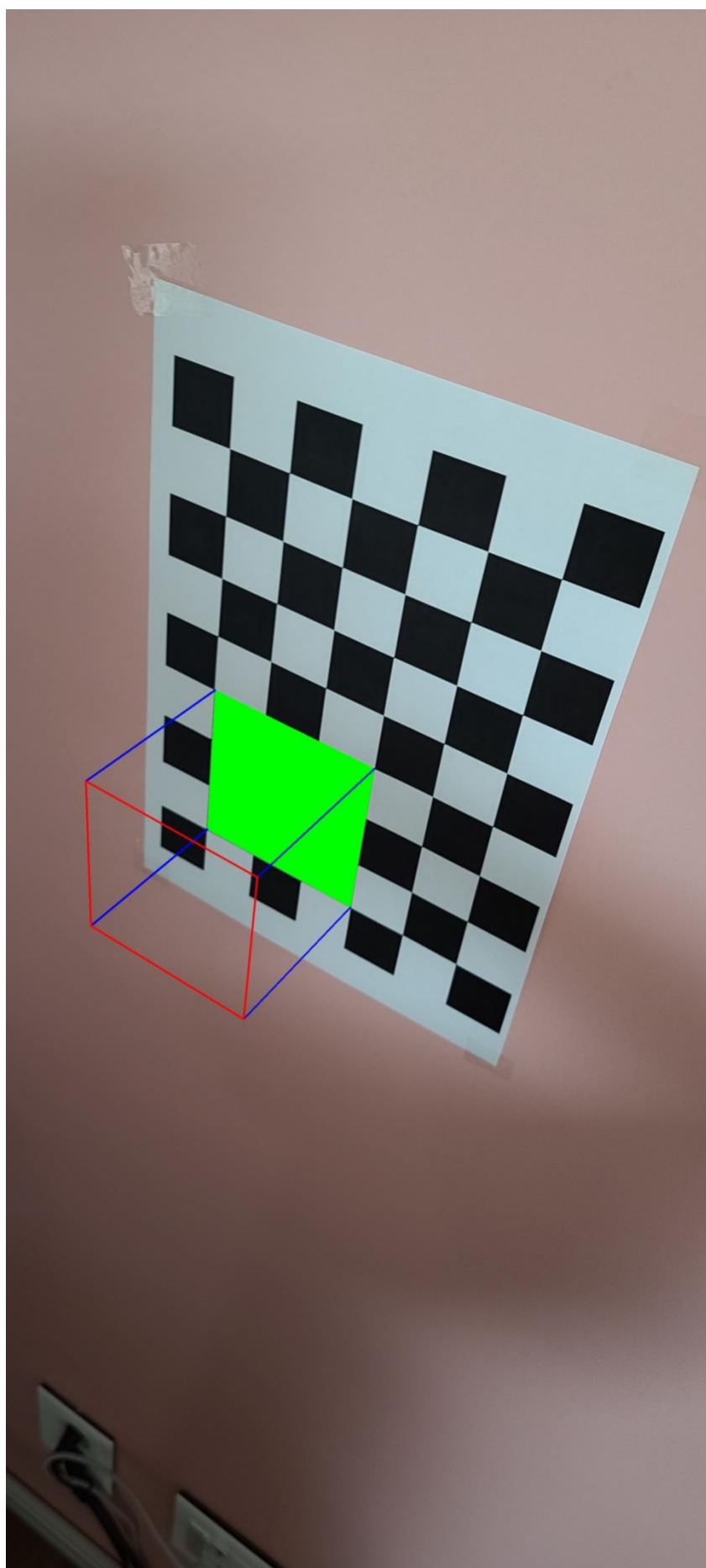




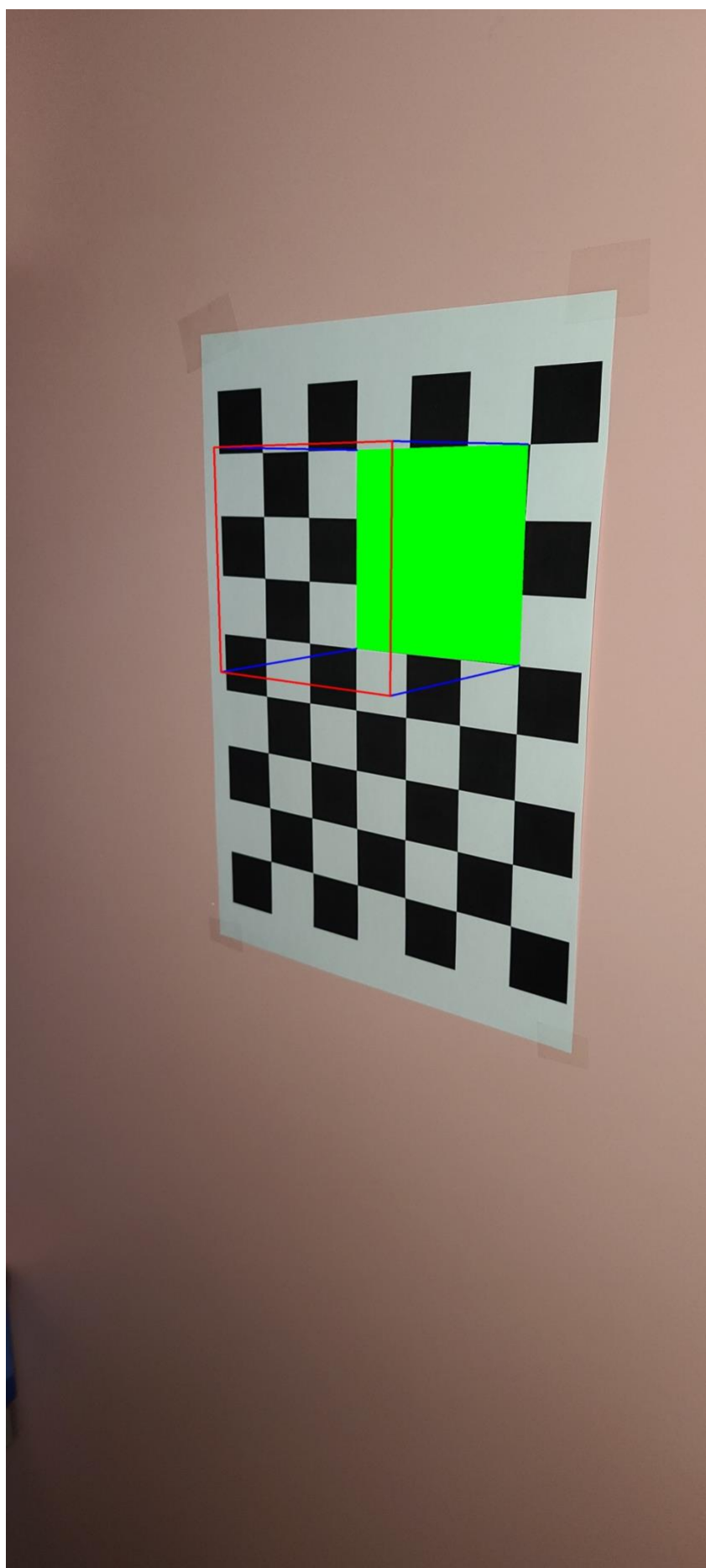


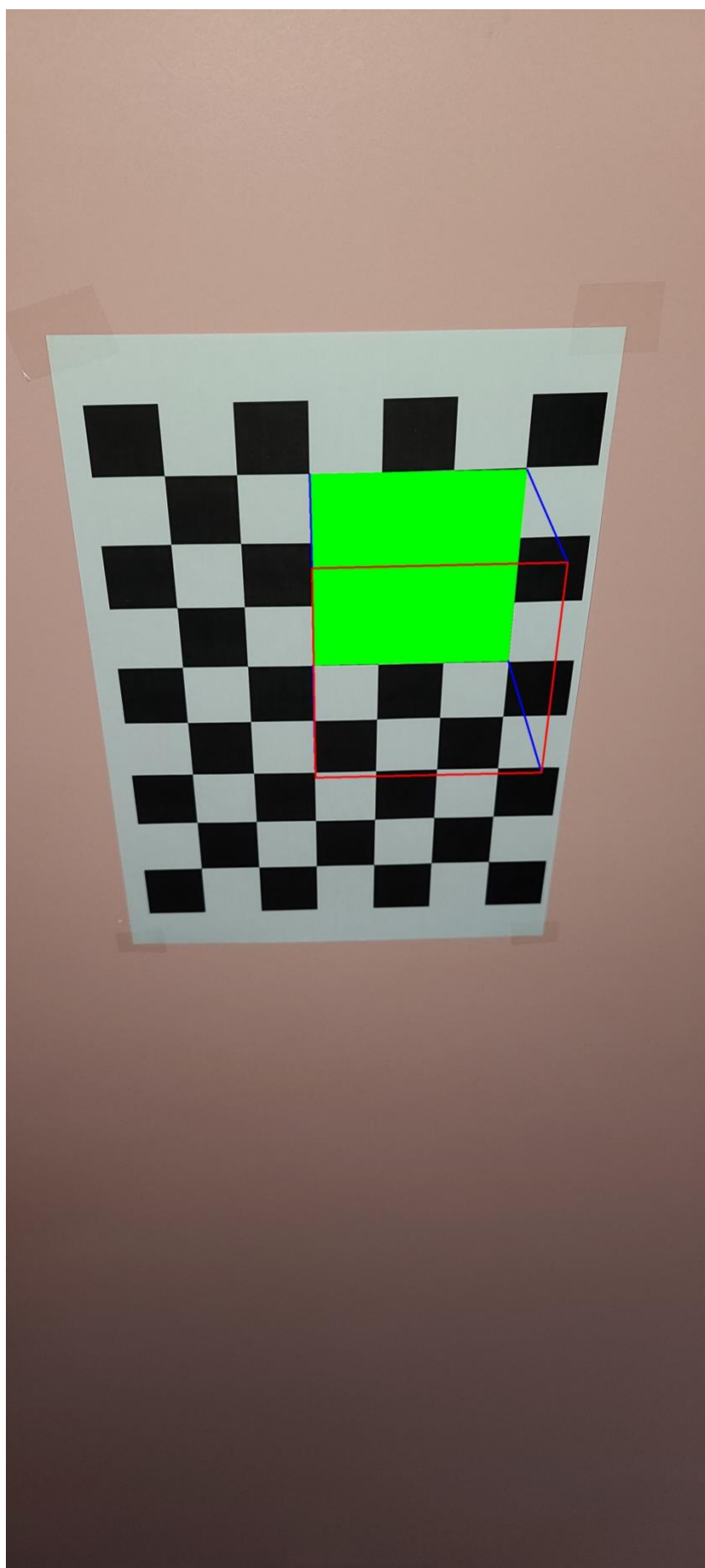


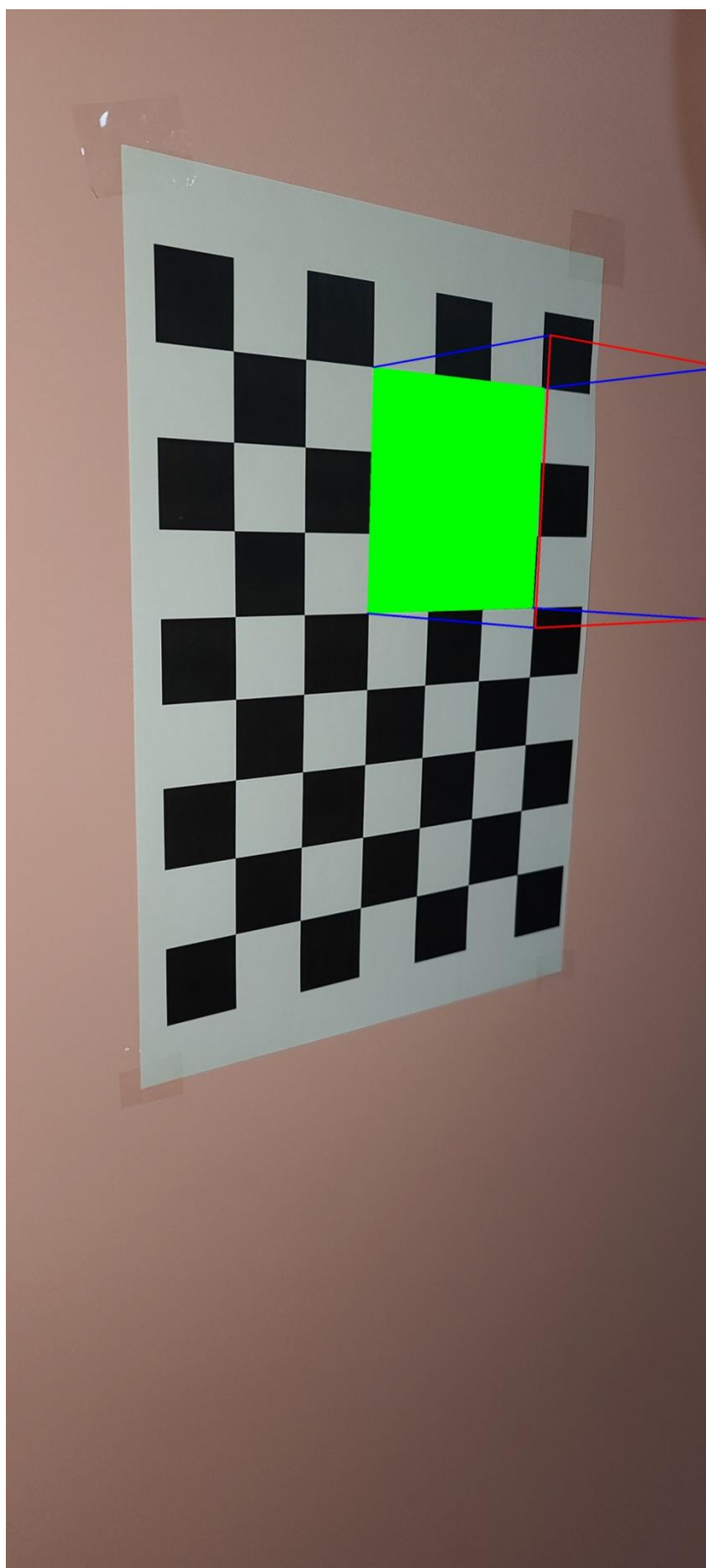












7. 코드 수정 부분

```
for fname in glob.glob  
('/content/gdrive/MyDrive/MachineVision/KakaoTalk_Photo_2022*.jpeg'):  
ret, corners = cv.findChessboardCorners(gray, (8,6),None)
```