[ ]:
```
import numpy as np
import scipy.ndimage
import scipy.signal
import matplotlib.pyplot as plt
from skimage import color, io
```

[ ]:
```
def grad(x):
    return np.array(np.gradient(x))
def norm(x, axis=0):
    return np.sqrt(np.sum(np.square(x), axis=axis))
def stopping_fun(x):
    return 1. / (1. + norm(grad(x))**2)
```

[ ]:
```
img = io.imread('ballon.jpg')
img = color.rgb2gray(img)
img = img - np.mean(img)

img_smooth = scipy.ndimage.filters.gaussian_filter(img, sigma=15)

F = stopping_fun(img_smooth)
```

[ ]:
```
plt.subplot(221),plt.imshow(img,cmap = 'gray')
plt.title('Original Image'), plt.xticks([]), plt.yticks([])
plt.subplot(222),plt.imshow(img_smooth,cmap = 'gray')
plt.title('Filtered Image'), plt.xticks([]), plt.yticks([])
plt.subplot(223),plt.imshow(F,cmap = 'gray')
plt.title('Level set Gaussian Image'), plt.xticks([]), plt.yticks([])
```