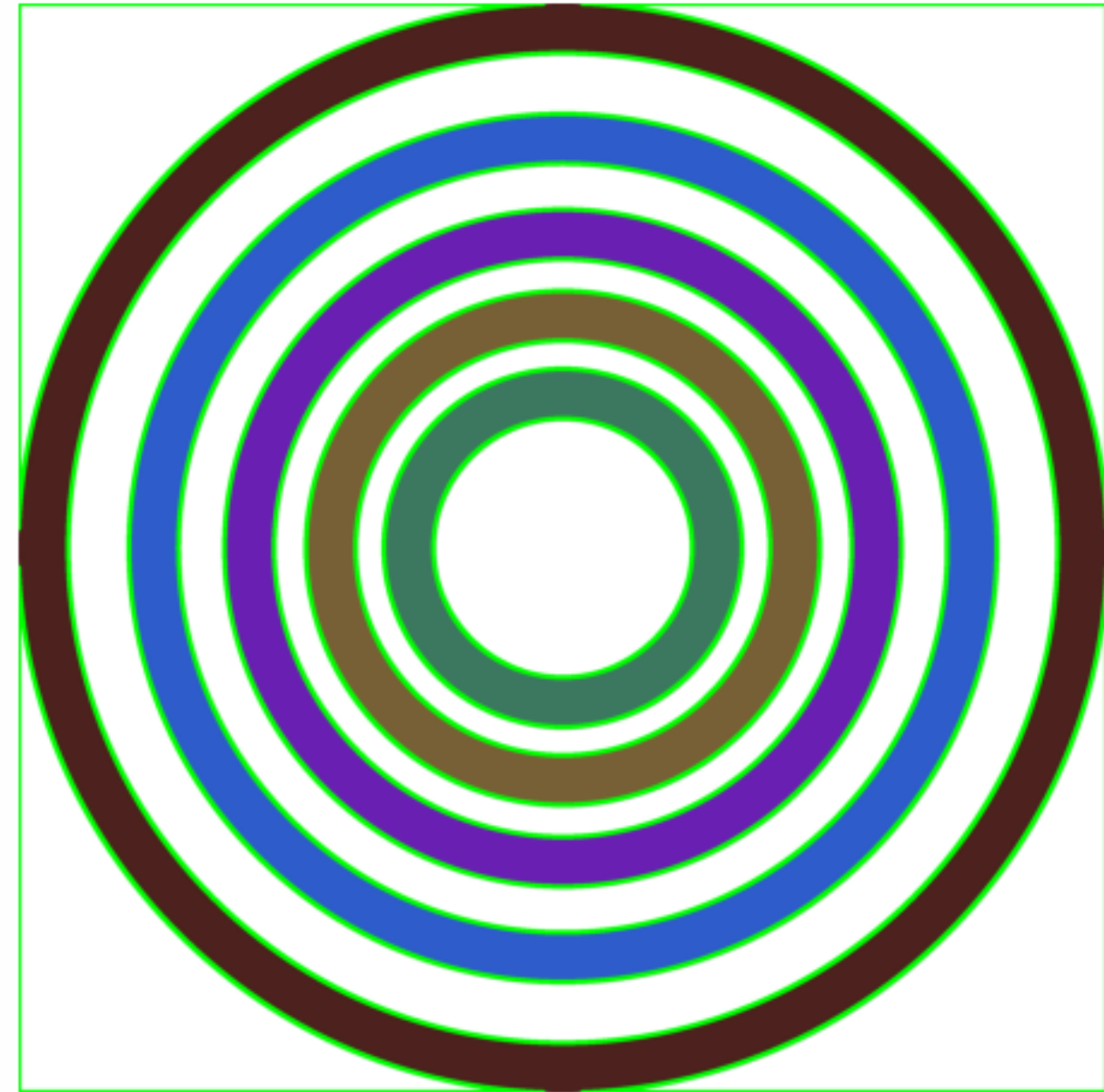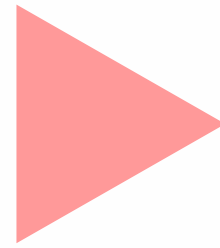# Exercises 11
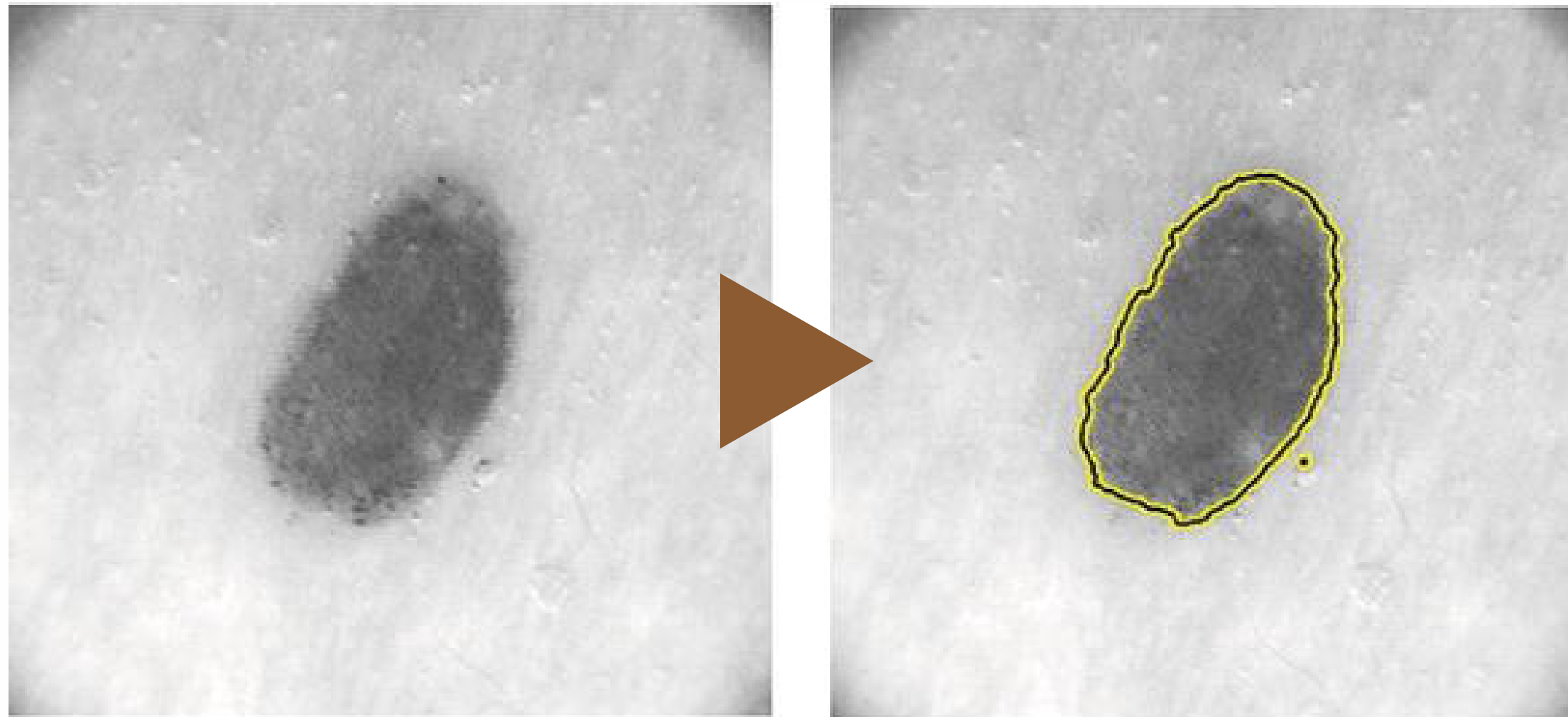
**Hough Transform, Contours and Segmentation (1100)**

# 1. Find and plot the Circles in the image (b.jpg), for pixels with intensity greater than 120.

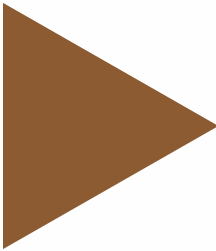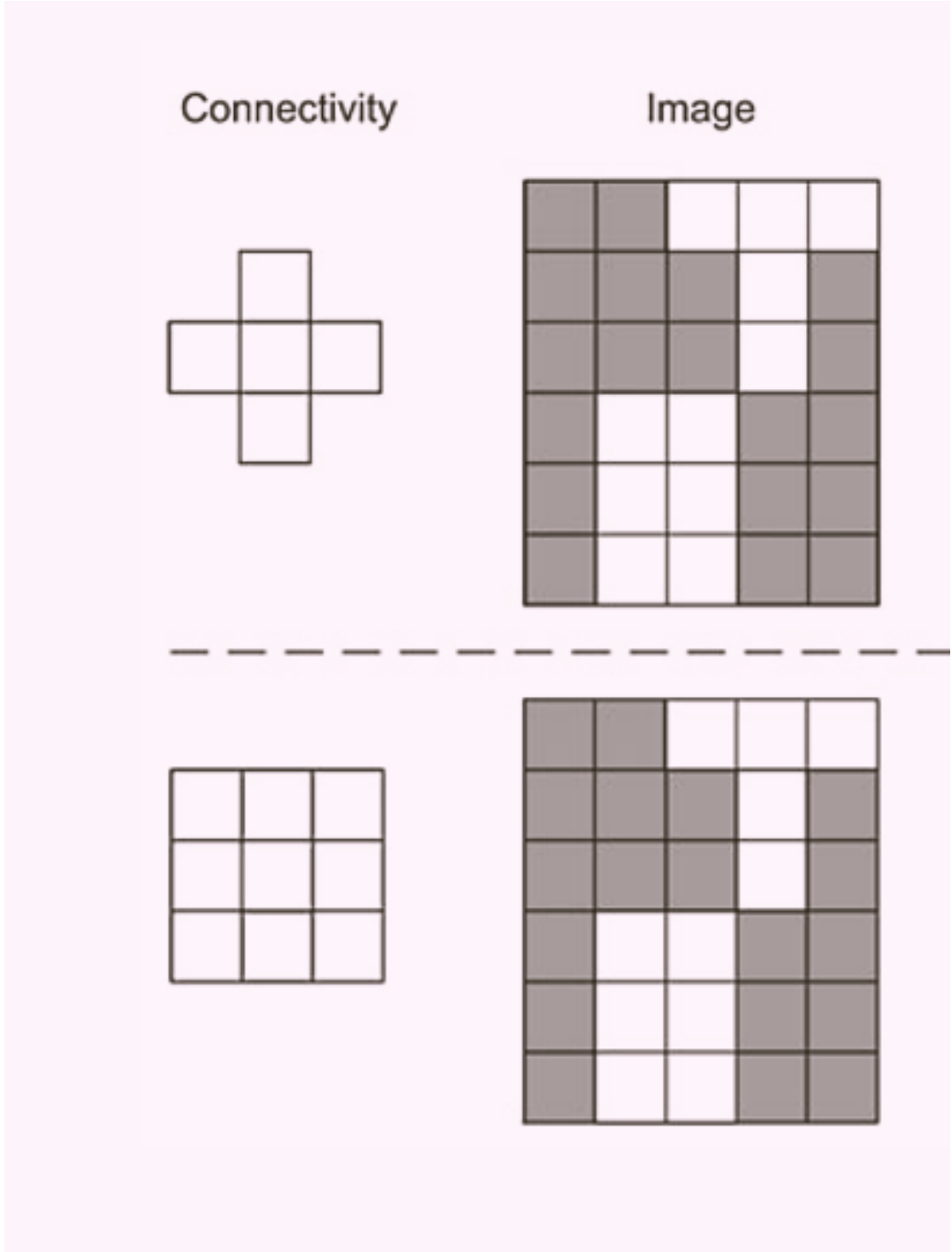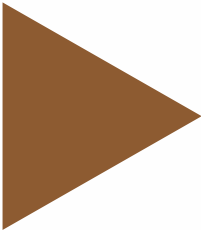**For Example:**

**2. Find the shape of the following object using contours. (400)**

# 3. How many objects does the following binary image consist of? Get the shape of any object. (300)

**4. Do the segmentation of the following image in an adaptive thresholding. For this, consider a 3 x 3 window replace the center value with the average and consider 45 as the threshold. (output is binary image) (200)**

| 50 | 60 | 90 | 0 | 0 |
| --- | --- | --- | --- | --- |
| 18 | 95 | 20 | 36 | 0 |
| 8 | 10 | 1 | 0 | 0 |
| 6 | 20 | 40 | 20 | 80 |
| 3 | 0 | 0 | 15 | 0 |