1 Question: How would you find the boundary of the diffusion of each dye? (Note: If you have
  multiple answers in mind, break them apart and explain each one separately.) Explain each
  solution/algorithm in detail.

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3 Answers: The following steps are used to find diffusion boundaries of each dyes:
4   1. Extract color channels corresponding to each dyes (Red: channel 0, Green:
  channel 1).
5   2. Convert single-channel images to binary images using thresholding (Red: 0.06,
  Green: 0.06)
6   3. Connect neighboring pixels by filling small holes less than a certain pixels
  (Red: 64 pixels, Green: 128 pixels).
7   4. Remove noises by eliminating connected components that are less than a certain
  threshold (Red: 20000 pixels, Green: 64 pixels).
8   5. Soften edges by dilating the image with a certain matrix (Red: 3x3, Green: 4x4).
9   6. Find edges using Roberts Cross filter.