

TABLE 2. Exercise to help verify understanding
of experimental setup and meaning of results

Question	Answer
Originally, which samples were labeled green and red, and which green-red combinations were hybridized to each respective half of the array?	To verify that if the experimental cDNA was tagged with Cy5 (red) and added to array half “A,” that Cy3 (green)-tagged experimental cDNA was added to array half “B” (and the converse for the control sample).
For array half “B,” we did a dye reversal, but then “flipped” the red and green files when loading them into MAGIC Tool. What does this effectively do to Grid B in terms of what red and green represent?	MAGIC Tool only computes red-green ratios. Since a dye reversal effectively is a “flip” of the samples, MAGIC Tool needs to be instructed about this so that for array half “B” the raw red-green ratio is properly computed.
From the log transformed data, positive and negative numbers were obtained; ultimately, how were positive and negative numbers derived from red-green ratios?	Positive red-green ratios indicate that the signal from Cy5 (red) was greater than the signal from Cy3 (green); negative ratios indicate greater signal from Cy3 (green).
An array signal for a gene features strong red signals in array half “A” and strong green signals in array half “B” (and, similarly, weak green in “A” and weak red in “B”). In which yeast cell population (control or experimental) was the gene highly expressed?	Assuming that cDNA from the experimental cells was labeled with Cy5 in array half “A” (and Cy3 in “B”), then the gene expression was greatly enhanced in the experimental cells (also, the gene expression was repressed in the control cells).