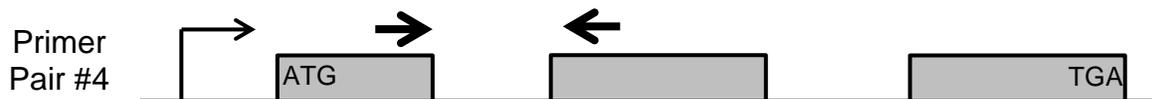
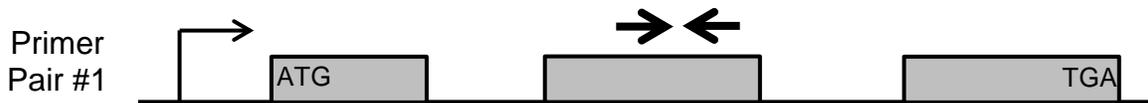


**7.003 Spring 2022  
Day 16 In-Lab Questions**

1) You have prepared cDNA from a human cell RNA sample and now want to perform qPCR to measure the levels of mRNA expression of your favorite gene, *YFG1*, shown in the diagram below. Gray boxes represent exons, and the space in between the gray boxes represents an intron of *YFG1*.



You have four possible primer pairs (shown below) that you can use for your qPCR:



Which primer pair would be the best to use? Explain why.

2) The agarose gel you poured today had a higher agarose percentage than the gels you previously poured (2% agarose vs 0.8% agarose). What is the reason for this?

MIT OpenCourseWare  
<https://ocw.mit.edu/>

7.003 Applied Molecular Biology Lab  
Spring 2022

For information about citing these materials or our Terms of Use, visit: <https://ocw.mit.edu/terms>.