

PCR Worksheet

1. Use colored pencils to draw the resulting eight double-stranded DNA molecules. Use one color for the original DNA strands, a second color for the primers, and a third color for the extender segments. (Draw the strands on the back of this worksheet.)
2. Eight double-stranded DNA molecules resulted after three complete cycles. How many molecules will result after 10 cycles? 20 cycles? 30 cycles? (*Hint: 2^N where N = number of cycles.*)
3. How do the amplified DNA strands compare with the original DNA strands?
4. After 30 cycles, what percent of the DNA in the test tube would be like the original DNA strand? What percent would be like the target segment?
5. Could DNA be amplified with only one primer? Why or why not?