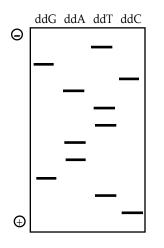
MIT Department of Biology 7.013: Introductory Biology - Spring 2005 Instructors: Professor Hazel Sive, Professor Tyler Jacks, Dr. Claudette Gardel

7.013 Solutions to: Applications of recombinant DNA technology



a) 5' CTGAATTACGT 3'

b) No, TA6's DNA sequence for gene K is different than that found on the note.

c) See above

d) TA1 and TA5. Their DNA samples at the gene L locus do not match the sample found on the bag.

e) The strategy is as follows: You design the following two primers to PCR amplify position Z.

primer 1	primer 2
>	
5 ' GTGCA3 ' 🗌	3 ' GCTGC5 ' 🗌

f) i)

1: TA2 2: TA5 3: TA1 4: TA3 or TA6 5: TA4 6: TA3 or TA6

ii) TA3 must have committed this crime. Only TA6 and TA3 match the sample taken from the note. TA6 is no longer a suspect due to part a.