Christine Callaghan manages a $100 million bond portfolio for a pension fund. At the beginning of the year, the modified duration of her portfolio was 10.0, and the yield to maturity was 8.0%.
She also is short 2000 T-bond futures, each of which has a PVBP of $100.
Her benchmark bond index is a Lehman Index that also had a modified duration of 10.0 and an average yield to maturity of 8.0% at the beginning of the year

.During the past year, returns for her portfolio and the Lehman Index were:

<table>
<thead>
<tr>
<th>Actual return</th>
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<tbody>
<tr>
<td>Callaghan portfolio:</td>
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<tr>
<td>Lehman Index:</td>
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</table>

a) What is your best guess as to the change in yields during the year?

b) How much do you estimate Ms. Callaghan made or lost from her futures position?

c) Evaluate Ms. Callaghan’s performance, and comment upon her selectivity and timing.