

2.1  $\$100 \times (1 + .05/2)^4 = \$110.38$ .

2.2 The return must satisfy this equation:

$$\$100 \times (1 + r/2)^6 = \$120$$

Solving,  $r=6.1707\%$ .

2.3 Use equation (2.9) of the text for  $t$  equal to .5, 1, and 1.5. The resulting spot rates are 3.822%, 3.997%, and 4.230%, respectively.

2.5 With spot rates as inputs, use equation (2.16) of the text. Here  $t$  is set to .5, 1, and then 1.5. The resulting forward rates are  $r(.5)=3.822\%$ ,  $r(1)=4.172\%$ , and  $r(1.5)=4.696\%$ .