Solution to FIN 533 Homework
Due Thursday, October 15

a.
Zero-coupon: $1,000 = FV 20 = N 4 = I/Y CPT PV = $456.39

8% coupon: $40 = PMT $1,000 = FV 20 = N 4 = I/Y CPT PV = $1,000.

10% coupon: $50 = PMT $1,000 = FV 20 = N 4 = I/Y CPT PV = $1,135.90

b.
Zero-coupon: $1,000 = FV 18 = N 4 = I/Y CPT PV = $493.63

$$HPR = \frac{(\$493.63 - \$456.39)}{\$456.39} = 8.16\%$$

8% coupon: $40 = PMT $1,000 = FV 18 = N 4 = I/Y CPT PV = $1,000.

$$HPR = \frac{\$80 + (\$1,000 - \$1,000)}{\$1,000} = 8.00\%$$

10% coupon: $50 = PMT $1,000 = FV 18 = N 4 = I/Y CPT PV = $1,126.59

$$HPR = \frac{\$100 + (\$1,1126.59 - \$1,135.90)}{\$1,135.90} = 7.98\%$$

c.
Zero-coupon: $1,000 = FV 18 = N 3.5 = I/Y CPT PV = $538.36

$$HPR = \frac{(\$538.36 - \$456.39)}{\$456.39} = 17.96\%$$

8% coupon: $40 = PMT $1,000 = FV 18 = N 3.5 = I/Y CPT PV = $1,065.95.

$$HPR = \frac{\$80 + (\$1,065.95 - \$1,000)}{\$1,000} = 14.59\%$$

10% coupon: $50 = PMT $1,000 = FV 18 = N 3.5 = I/Y CPT PV = $1,197.85

$$HPR = \frac{\$100 + (\$1,197.85 - \$1,135.90)}{\$1,135.90} = 14.26\%$$