

EXAM FM QUESTIONS OF THE WEEK

S. Broverman, 2007

Week of September 17/07

A bond of face amount 50,000 is purchased at a premium of 3600 to yield nominal annual 7% compounded semi-annually. The amount for amortization of premium in the 15th coupon is 141.06. What is the term of the bond?

- A) 11 years B) $11\frac{1}{2}$ years C) 12 years D) $12\frac{1}{2}$ years E) 13 years

The solution can be found below.

Week of September 17/07 - Solution

Amount for amortization in the first coupon period is

$$F(r - j) \cdot v^n = 141.06v_{.035}^{14} = 87.144$$

$$\rightarrow F(r - j) \cdot a_{\overline{n}|j} = (87.144)[1 + (1 + j) + \cdots + (1 + j)^n] = 3600$$

$$\rightarrow s_{\overline{n}|.035} = 41.31 \rightarrow n = 26 \text{ (13 years)}. \text{ Answer: E}$$