Bonds Calculation

The calculator enables you to solve for bond price (PRICE) (and the interest accrued since the last interest date) and the yield to maturity (YTM) in accordance with the Securities Industry Association's recommendations.

The Bond calculations are done assuming a semiannual coupon payment and using an actual/actual basis calendar (such as for U.S. Treasury bonds and U.S. Treasury notes). In accordance with market convention, prices are based on a redemption (par) value of 100.

The keys involved in the Bonds Calculation are:

[i]	Store the bond annual yield to maturity rate in percent.
[PV]	Stores the quoted bond price as a percent of par value.
[PMT]	Stores the bond annual coupon rate in % of the face value.
[f] [PRICE]	Calculates and displays the bond price in the settlement date with the given annual yield in and stores the calculated price in . Also calculates the interest accrued since the last interest date and stores it in the stack-Y register.
[f] [YTM]	Calculates and displays the bond yield given a quote price in and stores the calculated yield in .

After solving a bond problem, the **[FV]** register contains the redemption value plus the annual coupon rate percentage divided by two, and the **[n]** register contains the days from settlement date to the next coupon date divided by the number of days in the coupon period in which settlement occurs.

Example: Bond Price

What price should be paid on April 28, 2011 for a 6.75% U.S. Treasury bond that matures on June 4, 2025 if the buyer desires a yield of 8.25%?

(M.DY mode)

Keystrokes	Description
Type ”8.25” **[i]**	Type the desired bond yield and press “ **i** ”.
Type ”6.75” **[PMT]**	Type the annual coupon rate and press “**PMT**”.
Type ”4.282011 **[ENTER]**	Type the settlement date and press “ENTER”.
Type ”6.042025”	Type the maturity date.
[f] [PRICE]	Calculates the bond price as a percent of par. **Result = 87.62**
[X⇆Y]	Show the Accrued interest since the last coupon before the purchase date. **Result = 2.69**
[+]	Total price including accrued interest. **Result = 90.31**

Example: Bond Yield

The market is quoting 120.5% for the bond described in the preceding example. What yield will that provide?

(M.DY mode)

Keystrokes	Description
Type ”120.5” **[PV]**	Type the quoted bond yield and press “ **PV** ”.
Type “6.75” **[PMT]**	Type the annual coupon rate and press “**PMT**”
Type ”4.282011” **[ENTER]**	Type the settlement date and press “ENTER”.
Type ”6.042025”	Type the maturity date.
[f] [YTM]	Calculates the yield to maturity. **Result = 4.74%**