

Nikita Enterprises has bonds on the market making annual payments, with ten years to maturity, a par value of \$1,000, and selling for \$980. At this price, the bonds yield 7.5 percent. What must the coupon rate be on the bonds? **(Do not round intermediate calculations and enter your answer as a percent rounded to 2 decimal places, e.g., 32.16.)**

|             |  |   |
|-------------|--|---|
| Coupon rate |  | % |
|-------------|--|---|

### References

#### Worksheet

Learning Objective: 07-02 Explain bond values and yields and why they fluctuate.

#### Difficulty: 1 Basic

Section: 7.1 Bonds and Bond Valuation

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#### Explanation:

**Note: Intermediate answers are shown below as rounded, but the full answer was used to complete the calculation.**

Here we need to find the coupon rate of the bond. All we need to do is to set up the bond pricing equation and solve for the coupon payment as follows:

$$P = \$980 = C(PVIFA_{7.50\%,10}) + \$1,000(PVIF_{7.50\%,10})$$

Solving for the coupon payment, we get:

$$C = \$72.09$$

The coupon payment is the coupon rate times par value. Using this relationship, we get:

Coupon rate =  $\$72.09/\$1,000$   
Coupon rate = .0721, or 7.21%

**Calculator Solution:**

|           |    |      |        |         |         |
|-----------|----|------|--------|---------|---------|
| Enter     | 10 | 7.5% | ±\$980 |         | \$1,000 |
|           | N  | I/Y  | PV     | PMT     | FV      |
| Solve for |    |      |        | \$72.09 |         |

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