6. Award: 0 out of 10.00 points

Treasury bills are currently paying 8 percent and the inflation rate is 3 percent.

a. What is the approximate real rate of interest? **(Enter your answer as a percent rounded to 2 decimal places, e.g., 32.16.)**
b. What is the exact real rate? **(Do not round intermediate calculations and enter your answer as a percent rounded to 2 decimal places, e.g., 32.16.)**

a. Approximate real rate		%
b. Exact real rate		%

References

Worksheet Learning Objective: 07-04 Outline the impact of inflation on interest rates.

Difficulty: 1 Basic Section: 7.6 Inflation and Interest Rates

Treasury bills are currently paying 8 percent and the inflation rate is 3 percent.

a. What is the approximate real rate of interest? **(Enter your answer as a percent rounded to 2 decimal places, e.g., 32.16.)**
b. What is the exact real rate? **(Do not round intermediate calculations and enter your answer as a percent rounded to 2 decimal places, e.g., 32.16.)**

a. Approximate real rate	5.00+/-1%	%
b. Exact real rate	4.85+/-1%	%

Explanation:

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

The approximate relationship between nominal interest rates (*R*), real interest rates (*r*), and inflation (*h*) is:

$R \approx r + h$

Approximate $r = .08 - .030$
Approximate $r = .050$, or 5.00%

The Fisher equation, which shows the exact relationship between nominal interest rates, real interest rates, and inflation is:

$(1 + R) = (1 + r)(1 + h)$
$(1 + .08) = (1 + r)(1 + .030)$
$r = (1 + .08)/(1 + .030) - 1$
$r = .0485$, or 4.85%