



# Annual Percentage Yield

**Vocab:**

Annual Percentage Yield - (APY)

The % that you get back from your investments. Helps compare investments.

$$APY = \frac{\text{Interest earned}}{\text{principal}}$$

**LESSON  
12.2**

**EXAMPLE 1**

A14

Randall Raye invests \$5,000 in a certificate of deposit for 3 years. The certificate earns interest at an annual rate of 5.25% compounded quarterly. What is the annual percentage yield to the nearest thousandth of a percent?

$$5000(1.053543) = \$5267.72$$

$$\begin{array}{r} -5000 \\ \hline \$267.72 \text{ (in interest)} \end{array}$$

$$APY = \frac{267.72}{5000} = 0.053544$$

5.354%

**LESSON  
12.2**

Complete the problems to find the annual percentage yield. Check your answers in the back of the book. (Refer to the *Amount of \$1.00 Invested-Daily, Monthly, and Quarterly Compounding* table on page A14.)

1. National Bank offers a \$10,000 certificate of deposit at 5.75% compounded monthly

$$\frac{1.059040}{5.9049\%}$$

**LESSON  
12.2**

Complete the problems to find the annual percentage yield. Check your answers in the back of the book. (Refer to the *Amount of \$1.00 Invested-Daily, Monthly, and Quarterly Compounding* table on page A14.)

2. Lancaster Savings offers a \$25,000 certificate of deposit at 5% compounded quarterly.

$$1.050945$$

$$5.0959\%$$

**LESSON  
12.2****EXAMPLE 2**

Galeno Villarreal can invest \$10,000.00 at either 4.75% compounded daily for 4 years or 5% compounded quarterly for 4 years. Based on the annual percentage yield, which is the better investment?

$$1.048643$$
$$\boxed{4.864\%}$$

$$1.050945$$
$$\boxed{5.095\%}$$

**LESSON  
12.2**

Complete the problems. Check your answers in the back of the book.

Luisa Hernandez wants to invest \$20,000. Which 4-year investment is the best deal?

3. Compounded daily at 3.5% or compounded monthly at 3.75%.

$$1.035618$$
$$3.5629\%$$

$$1.038151$$
$$3.8159\%$$

best deal!

**LESSON  
12.2**

Complete the problems. Check your answers in the back of the book.

Luisa Hernandez wants to invest \$20,000. Which 4-year investment is the best deal?

4. Compounded quarterly at 4.5% or compounded monthly at 4.25%

$$1.045765$$
$$\boxed{4.577\%}$$

best deal!

$$1.043338$$
$$\boxed{4.3349\%}$$

**LESSON 12.2**

For Problems 5–8, use the *Amount of \$1.00 Invested—Daily, Monthly, and Quarterly Compounding* table on page A14.

	Annual Rate	Interest Period	Original Principal	Amount per \$1.00	Amount	Interest Earned	Annual percentage yield
5.	3.50%	1 year quarterly	\$6,000	a.	b.	c.	d.

Handwritten calculations and annotations:

- Red text:  $1.035462$  (with an arrow pointing to cell 'a')
- Green text:  $6000(1.035462) = \$6212.77$
- Blue text:  $\begin{array}{r} 6212.77 \\ - 6000 \\ \hline \$212.77 \end{array}$  (with an arrow pointing to cell 'c')
- Black text:  $\begin{array}{r} 212.77 \\ \hline 6000 \\ 0.03546 \end{array}$  (with an arrow pointing to cell 'd')
- Black text:  $3.5469\%$  (circled, with an arrow pointing to cell 'd')