

Name: \_\_\_\_\_

# Calculating Compound Interest



## Compound Interest Formula

$$A = P \left( 1 + \frac{r}{n} \right)^{nt}$$

Where A is the final amount, P is the initial principal balance, r is the interest rate (expressed as a decimal), n is the number of times the interest is compounded per period, and t is the number of years.

**Directions:** Use the compound interest formula to solve each of the following to the nearest cent.

- 1.) JT invests \$741 in a savings account with a fixed annual interest rate of 1% compounded 6 times per year. What will the account balance be after 25 years?
- 2.) Luigi invests \$741 in a savings account with a fixed annual interest rate of 6.7% compounded 2 times per year. What will the account balance be after 12 years?
- 3.) Bianca invests \$9,873 in a savings account with a fixed annual interest rate of 4.4% compounded 12 times per year. What will the account balance be after 30 months?
- 4.) Christian invests \$15,000 in a savings account with a fixed annual interest rate of 3.89% compounded 4 times per year. What will the account balance be after 5 years?
- 5.) Tina invests \$10,210 in a savings account with a fixed annual interest rate of 5.16% compounded 10 times per year. What will the account balance be after 4.25 years?
- 6.) Gerald invests \$75,350 in a savings account with a fixed annual interest rate of 8.08% compounded 2 times per year. What will the account balance be after 9 years?
- 7.) Desiree invests \$806 in a savings account with a fixed annual interest rate of 12.72% compounded 36 times per year. What will the account balance be after 8.5 years?
- 8.) Andruw invests \$54,777 in a savings account with a fixed annual interest rate of 6.09% compounded 8 times per year. What will the account balance be after 21 years?

## ANSWER KEY

1.) JT invests \$741 in a savings account with a fixed annual interest rate of 1% compounded 6 times per year. What will the account balance be after 25 years?

**\$951.26**

2.) Luigi invests \$741 in a savings account with a fixed annual interest rate of 6.7% compounded 2 times per year. What will the account balance be after 12 years?

**\$1,634.07**

3.) Bianca invests \$9,873 in a savings account with a fixed annual interest rate of 4.4% compounded 12 times per year. What will the account balance be after 30 months?

**\$11,018.80**

4.) Christian invests \$15,000 in a savings account with a fixed annual interest rate of 3.89% compounded 4 times per year. What will the account balance be after 5 years?

**\$18,203.44**

5.) Tina invests \$10,210 in a savings account with a fixed annual interest rate of 5.16% compounded 10 times per year. What will the account balance be after 4.25 years?

**\$12,706.37**

6.) Gerald invests \$75,350 in a savings account with a fixed annual interest rate of 8.08% compounded 2 times per year. What will the account balance be after 9 years?

**\$153,705.51**

7.) Desiree invests \$806 in a savings account with a fixed annual interest rate of 12.72% compounded 36 times per year. What will the account balance be after 8.5 years?

**\$2,371.74**

8.) Andruw invests \$54,777 in a savings account with a fixed annual interest rate of 6.09% compounded 8 times per year. What will the account balance be after 21 years?

**\$195,845.71**