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 in 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.) Adam invests $2,000 in a savings account with a fixed annual interest rate of 4% compounded 2 times per year. What will the account balance be after 3 years?

2.) Olivia invests $4,850 in a savings account with a fixed annual interest rate of 5% compounded 2 times per year. What will the account balance be after 6 years?

3.) Bryce invests $6,333 in a savings account with a fixed annual interest rate of 7% compounded 2 times per year. What will the account balance be after 10 years?

4.) Kim invests $4,327 in a savings account with a fixed annual interest rate of 2% compounded 4 times per year. What will the account balance be after 4 years?

5.) Trea invests $16,000 in a savings account with a fixed annual interest rate of 4.5% compounded 3 times per year. What will the account balance be after 7 years?

6.) Angie invests $7,059 in a savings account with a fixed annual interest rate of 3.75% compounded 6 times per year. What will the account balance be after 18 months?

7.) Rocco invests $418 in a savings account with a fixed annual interest rate of 9.05% compounded 24 times per year. What will the account balance be after 11 years?

8.) LaKeith invests $30,600 in a savings account with a fixed annual interest rate of 4.65% compounded 12 times per year. What will the account balance be after 6.5 years?

ANSWER KEY

1.) Adam invests $2,000 in a savings account with a fixed annual interest rate of 4% compounded 2 times per year. What will the account balance be after 3 years?

$2,252.32

2.) Olivia invests $4,850 in a savings account with a fixed annual interest rate of 5% compounded 2 times per year. What will the account balance be after 6 years?

$6,522.71

3.) Bryce invests $6,333 in a savings account with a fixed annual interest rate of 7% compounded 2 times per year. What will the account balance be after 10 years?

$12,601.33

4.) Kim invests $4,327 in a savings account with a fixed annual interest rate of 2% compounded 4 times per year. What will the account balance be after 4 years?

$4,686.45

5.) Trea invests $16,000 in a savings account with a fixed annual interest rate of 4.5% compounded 3 times per year. What will the account balance be after 7 years?

$21,872.93

6.) Angie invests $7,059 in a savings account with a fixed annual interest rate of 3.75% compounded 6 times per year. What will the account balance be after 18 months?

$7,466.14

7.) Rocco invests $418 in a savings account with a fixed annual interest rate of 9.05% compounded 24 times per year. What will the account balance be after 11 years?

$1,129.02

8.) LaKeith invests $30,600 in a savings account with a fixed annual interest rate of 4.65% compounded 12 times per year. What will the account balance be after 6.5 years?

$41,374.55