

## Technology Activity

(Use with Lesson 4-4)

## Compound Interest

Compound interest is interest paid on both the principal, or amount deposited, and the accumulated unpaid interest. To complete this activity using a TI-82/83, press **MODE** and set the calculator to 2 decimal places.

To complete each table, predict the account that you think will make the most money. Then use a graphing calculator to see if your prediction was correct.

1.

Account	Keystrokes
a. \$1000 at 5% compounded annually	1000 $\times$ ( ( 1 + .05 ) ) <b>ENTER</b>
b. \$1000 at 5% compounded semiannually	1000 $\times$ ( ( 1 + .05 $\div$ 2 ) ) <b>ENTER</b> $\times$ ( ( 1 + .05 $\div$ 2 ) ) <b>ENTER</b>
c. \$1000 at 5% compounded quarterly	1000 $\times$ ( ( 1 + .05 $\div$ 4 ) ) <b>ENTER</b> $\times$ ( ( 1 + .05 $\div$ 4 ) ) <b>ENTER</b> $\times$ ( ( 1 + .05 $\div$ 4 ) ) <b>ENTER</b> $\times$ ( ( 1 + .05 $\div$ 4 ) ) <b>ENTER</b>

Prediction \_\_\_\_\_

Actual best option **c**

2.

Account	Keystrokes
a. \$2000 at 4% compounded annually for five years	2000 $\times$ ( ( 1 + .04 ) ) <b>ENTER</b> $\times$ ( ( 1 + .04 ) ) <b>ENTER</b> <b>ENTER</b> <b>ENTER</b> <b>ENTER</b>
b. \$2000 at 5% compounded semiannually for four years <i>Press ENTER twice for each year.</i>	2000 $\times$ ( ( 1 + .05 $\div$ 2 ) ) <b>ENTER</b> $\times$ ( ( 1 + .05 $\div$ 2 ) ) <b>ENTER</b> <b>ENTER</b> <b>ENTER</b> <b>ENTER</b> <b>ENTER</b> <b>ENTER</b> <b>ENTER</b>

Prediction \_\_\_\_\_

Actual best option **b**

3. When compounding semiannually, why must you press **ENTER** twice for each year?

**Because the interest is compounded twice per year.**

4. On what things should you base a decision about a savings plan?

**interest rate, how long money will be invested, risk, how often money is compounded**