TI – 73 EXPLORER™
7TH GRADE ACTIVITY 7:
TWO FRIENDS' METHODS

TEXAS INSTRUMENTS


ACTIVITY OVERVIEW:
In this activity we will
- Investigate decrease in items as a percent change
- Consider several methods for calculating percent change
- Develop a procedure that can be repeated to solve problems

Milo tells Otis his brother has just purchased a car. "It is worth $20,000". Every year, "it loses 5% of its value." Otis says, "When will it be worth $10,000? Will it take 10 years?" Milo states, "I have a way to figure this out. Let me explain it to you."

Start with your $20,000. Use your calculator. You can't do this with your fingers and maybe not in your head. You'll see why Otis. Type in the 20000. Press β to enter that value in your calculator. When it shows up on the right, the calculator knows your number.

```
20000          20000




```

Press M to multiply and enter .05. Press β. Then subtract those two numbers. You can arrow up to each number and press β to "grab" the number to use it. That's how much is left after 1 year.

```
20000          20000
Ans*.05         1000
20000-1000
               19000

```
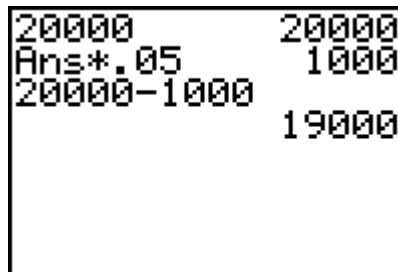
Write it down in a table with the amount of years in the first column and the new value in the second column. You'll find the answer that way. Don't forget to round the answer to You can do two decimal places. Write this in your notebook or a piece of paper.

Otis thinks for a minute. "I think I have a better way Milo. It will even keep track of the amount of years." Milo frowns. "You can't do that with a calculator. If you're so sure, show me how it's done."

Otis press the − key and □. He then sets the calculator to remove 5% of the price constantly. His calculator screen looks just like the one on the right.

```
Set Constant:
 Single Multiple
C₁■*(1−.05)
C₂=
C₃=
C₄=
```

Otis then presses − λ and then clears the screen by pressing :. He enters the 20000 and presses β. Then, for each year, he presses ≅

```
20000          20000
20000*(1−.05)
n=1             19000
19000*(1−.05)
n=2             18050
```

You can copy the n for the year and the amount next to it that remains. Again, round it to two decimal places.

Compare the two methods and decide which one you like better. Can you come up with your own method to improve on Milo and Otis' procedures?