1. Suppose $100.00 is deposited into a savings account with an interest rate of 4% compounded quarterly. How much is in the account for each of the first 8 quarters?

Because this is a discrete model, it can be modeled as a sequence. Although the menu says Recursion, it can be used for both explicit and recursive sequences. From the Main Menu, press $\boxed{8}$ to open the sequence editor. If the type is not a_n, press $\boxed{F3}$ (TYPE) $\boxed{F1}$ (a_n). The account pays 1% per quarter so enter the formula as shown, using $\boxed{F1}$ (n) for n. Press $\boxed{\text{EXE}}$.
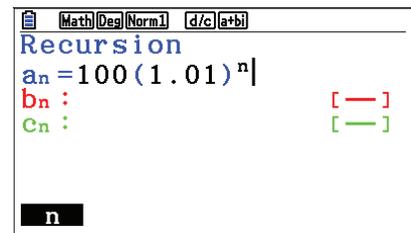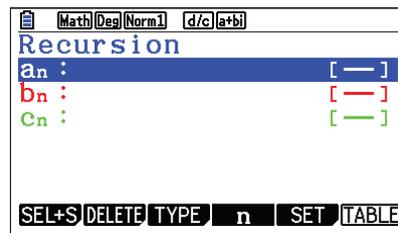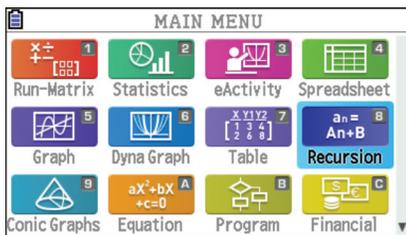
To create a table of values, press $\boxed{F5}$ (SET). Select **Start** and **End** values and press $\boxed{\text{EXE}}$ after entering each value. To display the table, press $\boxed{\text{EXIT}}$ $\boxed{F6}$ (TABLE).
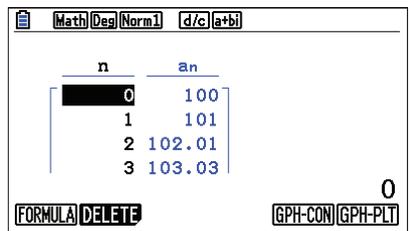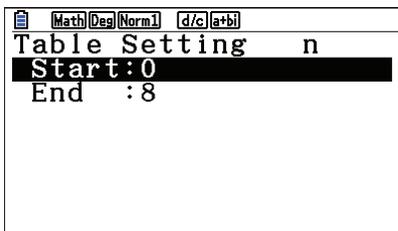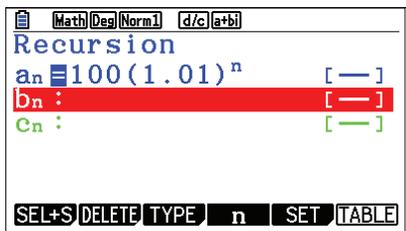
This sequence can also be viewed as a graph. Before plotting the graph, set a window by pressing $\boxed{\text{SHIFT}}$ $\boxed{F3}$ **(V-Window)**. Press $\boxed{\text{EXIT}}$. To see the graph, press $\boxed{F6}$ (GPH-PLT). To trace on the graph, press $\boxed{\text{SHIFT}}$ $\boxed{F1}$ **(Trace)**.
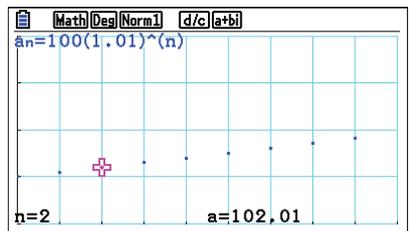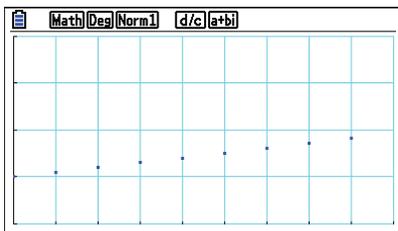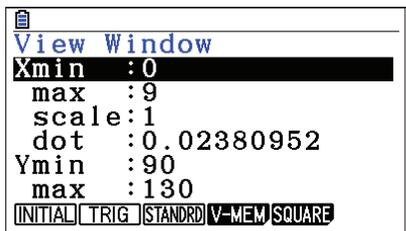
The sequence can also be created as a recursive formula. Return to the editor using [SHIFT] [EXIT] **(QUIT)**. To change the type, press [F3] (TYPE) [F2] (**a$_{n+1}$**) and edit the equation. To insert **a$_n$**, press [F2] (**a$_n$**) then [EXE]. To specify the initial value, press [F5] (SET). For a$_0$, enter [1] [0] [0] [EXE].

To see the table, press [EXIT] [F6] (TABLE). To view a graph, press [F6] (GPH-PLT).

2. How long will it take for the account to double in value to $200.00?

One good way to answer this question is to return to the Equation menu. Press [MENU] [X,θ,T] (A). To enter the equation, press [F3] (SOLVER). If [F3] (SOLVER) is not an option, press [EXIT] until it is. To insert the =, press [SHIFT] [·] **(=)**. Once the equation is entered, press [EXE] or [F6] (SOLVE). It will take 70 quarters or $17\frac{1}{2}$ years for the investment to double.