

## USING A TEXAS INSTRUMENTS FINANCIAL CALCULATOR

### FV or PV Calculations:

- 1) Type in the present value (PV) or future value (FV) amount and then press the PV or FV button.
- 2) Type the interest rate as a percent (if the interest rate is 8% then type "8") then press the interest rate (I/Y) button. If interest is compounded semi-annually, quarterly, etc., make sure to divide the interest rate by the number of periods.
- 3) Type the number of periods and then press the period (N) button. If interest is compounded semi-annually, quarterly, etc., make sure to multiply the years by the number of periods in one year.
- 4) Once those elements have been entered, press the compute (CPT) button and then the FV or PV button, depending on what you are calculating.

If both present value and future value are known, they can be used to find the interest rate or number of periods. Enter all known information and press CPT and whichever value is desired. When entering both present value and future value, they must have opposite signs.

### Ordinary Annuity Calculations:

- 1) Press the 2<sup>nd</sup> button, then the FV button in order to clear out the TVM registers (CLR TVM).
- 2) Type the equal and consecutive payment amount and then press the payment (PMT) button.
- 3) Type the number of payments and then press the period (N) button.
- 4) Type the interest rate as a percent (if the interest rate is 8% then type "8") then press the interest rate button (I/Y).
- 5) Press the compute (CPT) button and then either the present value (PV) or the future value (FV) button depending on what you want to calculate.

If both present value and future value are known, they can be used to find the interest rate, payment, or number of payments. Enter all known information and press CPT and whichever value is desired. When entering both the PMT and the present value or future value, they must have opposite signs.

### Annuity Due:

- 1) Press the 2<sup>nd</sup> button, then the payment (PMT) button to switch to Begin (BGN) mode. (The screen should say "END" and there should be a small "SET" at the top of the screen.)
- 2) Press the 2<sup>nd</sup> button, then the ENTER button to "SET" the calculator to Begin (BGN) mode. (The screen should say "BGN" and there should be a small "BGN" at the top of the screen.)
- 3) Press the CE/C button to clear the display and return to the main screen. The calculator is now in annuity due mode.
- 4) Follow the steps for an ordinary annuity.

To switch back to ordinary annuity mode, follow the same steps.

## **Net Present Value:**

- 1) Press the cash flow (CF) button to enter the Cash Flow worksheet.
- 2) Press the 2<sup>nd</sup> button followed by the CE/C button to clear the worksheet.
- 3) The calculator should say CFo. Enter the initial (time zero) cash flow and then press ENTER followed by the down arrow.
- 4) The calculator should say C01. Enter the next cash flow then press ENTER followed by the down arrow.
- 5) The calculator should say F01. Enter the frequency of the cash flow. If the cash flow only happens once enter "1". If the cash flow occurs 4 times enter "4". Press ENTER followed by the down arrow to enter the next cash flow. Repeat this process until all cash flows are entered.
- 6) Press the net present value (NPV) button.
- 7) Type in the interest rate as a percent, and press the ENTER button followed by the down arrow.
- 8) Press the CPT button to get the net present value.

## **Internal Rate of Return:**

- 1) Enter the cash flows in the same way as a net present value problem.
- 2) Instead of pressing NPV, press the internal rate of return (IRR) button followed by the CPT button to get the internal rate of return.