Finding Net Present Value (NPV) or Internal Rate of Return (IRR) of a Sequence of Cash Flows.

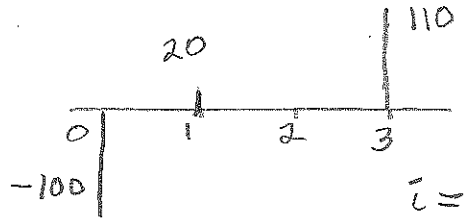
Texas Instruments - BA II Plus

Clear Cash Flow Registers

Do this before each use of the Cash Flow registers.

Press [CF] [2nd] [CLR WORK]

Example A: Find NPV for



$i = .052$

Press [CF] (CF_0 = is displayed)

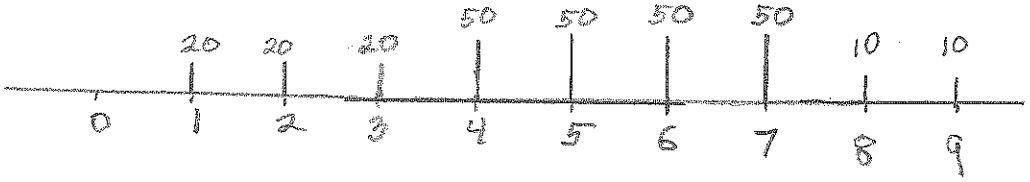
Press	100 [+/-] [Enter] [↓]	-100 @ t=0	CF_0
Press	20 [Enter] [↓] [↓]	20 @ t=1	CF_1
Press	[Enter] [↓] [↓]	0 @ t=2	CF_2
Press	110 [Enter]	110 @ t=3	CF_3
Press	[NPV] 5.2 [Enter] [↓]	interest rate	
Press	[CPT]	produces 13.49262101 as NPV	

Stores amounts in registers CF_0 (ie t=0), CF_1 (t=1), ... CF_{24} (t=24).

Example B: Find NPV for annuity immediate with payments occuring in blocks.

Annuity pays 20 for the first 3 periods
pays 50 for the next 4 periods
and pays 10 for the last 2 periods

$i = .043$



Press [CF] [↓]

Press 20 [Enter] [↓] 3 [Enter] [↓] : Three payments of 20 beginning @ $t=0$

Press 50 [Enter] [↓] 4 [Enter] [↓] Four payments of 50 beginning thereafter

Press 10 [Enter] [↓] 2 [Enter] [↓] Two payments of 10 beginning thereafter

Press [NPV] 4.3 [Enter] [↓] interest rate

Press [CPT]

produces 228.009222

as the $NPV \equiv PV_0$

This is the same number as

$$20a_{\overline{3}|.043} + 50a_{\overline{4}|.043}v^3 + 10a_{\overline{2}|.043}v^7$$

Example C: Using the Example A setting find the Internal Rate of Return (IRR)

Press [CF]

Press 100 [+/−] [Enter] [↓]

Press 20 [Enter] [↓] [↓]

Press [Enter] [↓] [↓]

Press 110 [Enter]

Press [IRR] [CPT] produces 10.34367849 the IRR as a %.