**Converting between Base-N numbers using the Casio FX-115ES Plus USAFA issue calculator**

There is also a stream link [here](https://web.microsoftstream.com/video/708a4f01-dc23-4293-85db-0708201d386d).

1. Place your calculator in the "Base-N" mode

- Hit the 'MODE' key

- Select Option "4: BASE-N" by hitting the '4' key.

2. You are now in BASE-N mode.

- The current base is displayed on the screen as follows:

--Decimal = "Dec"

--Hexadecimal = "Hex"

--Binary = "Bin"

--Octal = "Oct"

- These correspond to the "DEC", "HEX", "BIN", and "OCT" on the keypad in green.

-- The base-n keys are above the 'x^2', 'x^\*', 'log', and 'ln' keys.

-- You do not have to use the shift key to use the base buttons as long as you are in base-N mode.

3. To convert between bases, follow the following steps

- Ensure you are in "BASE-N" mode and your base is set appropriately as desired

- Enter your value, then hit the '=' key

- Your value should be just below the base designation: (Dec, Hex, Bin, or Oct)

- Hit the key corresponding the the base that you will convert to

4. Example, to convert the value 134 in decimal to binary:

- If not in Base-n mode, Hit the 'MODE' key and select option "4:BASE-N"

- You should be in Dec (or Decimal) mode. If not, hit the 'x^2' key to put in decimal mode

- Enter "134" followed by the '=' key. You should see your value of 134 immediately below "Dec" on the screen

- Hit the 'log' key to convert to Binary. You should see "Bin" on the screen with "10000110" preceded by zeros.