**Steps to converting from standard** $(y = ax^2 + bx + c)$ _**to vertex form**_: $y = a(x - h)^2 + k$

**Step 1**: Label a, b, c.

A is the number next to the squared term

B is the number next to the x term

C is the constant (number only, no variable)

Using 2nd cos, hit enter. Enter the a, b, and c values and scroll until the a, h, and k values appear on the screen.

Now enter the h and k values into vertex form.

1. $Y = x^2 - 12x + 38$ 2. $Y = x^2 - 14x + 50$ 3. $Y = x^2 + 12x + 13$ 4. $Y = x^2 + 8x - 1$

Put in vertex form when a ≠ 1: Follow the same steps as above but the number in front of the squared term is the a value

1. $y = 2x^2 + 12x + 13$ 2. $Y = 2x^2 + 16x + 10$ 3. $Y = 3x^2 - 30x + 3$ 4. $Y = 2x^2 - 4x - 1$