Review

Recall the structure of a double for loop...

```python
for y in range(num1, num2):
    #traverse rows
    for x in range(num1, num2):
        #traverse columns
        probably getPixel(picture, x, y)
        do something with that pixel
```
Canvas

- `makeEmptyPicture(width?, height?, white)`
def copy(picture):
    make a canvas
def copy(picture):
    make a canvas
    initialize targetY
def copy(picture):
    make a canvas
    initialize targetY = 0
def copy(picture):
    make a canvas
    initialize targetY
    initialize targetX = 0
def copy(picture):
    make a canvas
    initialize targetY
    initialize targetX
    for each y in picture (sourceY)
Copying

def copy(picture):
    make a canvas
    initialize targetY
    initialize targetX
    for each y in picture
        for each x in picture (sourceX)
def copy(picture):
    make a canvas
    initialize targetY
    initialize targetX
    for each y in picture
        for each x in picture
            find the picture’s pixel (sourceX, sourceY)
            find the color of that pixel & assign it to a variable
            find the target’s pixel (targetX, targetY)
            set the color of the target pixel to the color
def copy(picture):
    make a canvas
    initialize targetY
    initialize targetX
    for each y in picture
        for each x in picture
            find the picture’s pixel (sourceX, sourceY)
            find the color of that pixel & assign it to a variable
            find the target’s pixel (targetX, targetY)
            set the color of the target pixel to the color
            increment targetX
            increment targetY

Copying
def copy(picture):
    make a canvas
    initialize targetY
    initialize targetX
    for each y in picture
        for each x in picture
            find the picture’s pixel (sourceX, sourceY)
            find the color of that pixel & assign it to a variable
            find the target’s pixel (targetX, targetY)
            set the color of the target pixel to the color
            increment targetX
            increment targetY
    show the final result which should be on your canvas