Name _____

CPADS Exam 1 Review

1. Open PyCharm making sure to select the Python 3.x interpreter. Create a new project named **CS100-Exam1Review**. Right click on **CS100-Exam1Reveiw** in the left sidebar and select **New->Python File**. Name the file **diamond.py**. Type the following code **exactly** as shown *copying* the **drawSquareFromCenter()** function code from **pinwheel.py** in **CS100-Lab3**

```
import turtle
from math import *

# COPY THE CODE FOR THIS FUNCTION FROM LAB 3 HERE
# Function to draw a square about the current position
#    First argument is turtle to draw with
#    Second argument is size of square sides
def drawSquareFromCenter(t,size):...

def main():
    # Create turtle named bob
    bob = turtle.Turtle()

    # Get user input
    size1 = int(input('Enter size for the top square: '))

    # Draw graphics
    drawSquareFromCenter(bob,size1)


    # Press any key to exit
    input()

main()
```

   The program should prompt the user to enter a size for the first square draw it centered about the origin.

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2. Develop a strategy and write code using **drawSquareFromCenter(x)** to construct the following diamond figure *assuming the cursor begins as shown*. The user will enter **size1** which represents the size of the smaller squares. The cursor should be returned to its original position *using computations*. **There should be no computations in drawing commands, use intermediate variables for calculated values.**

   Hint: Consider how the cursor must move in between each piece of the figure.