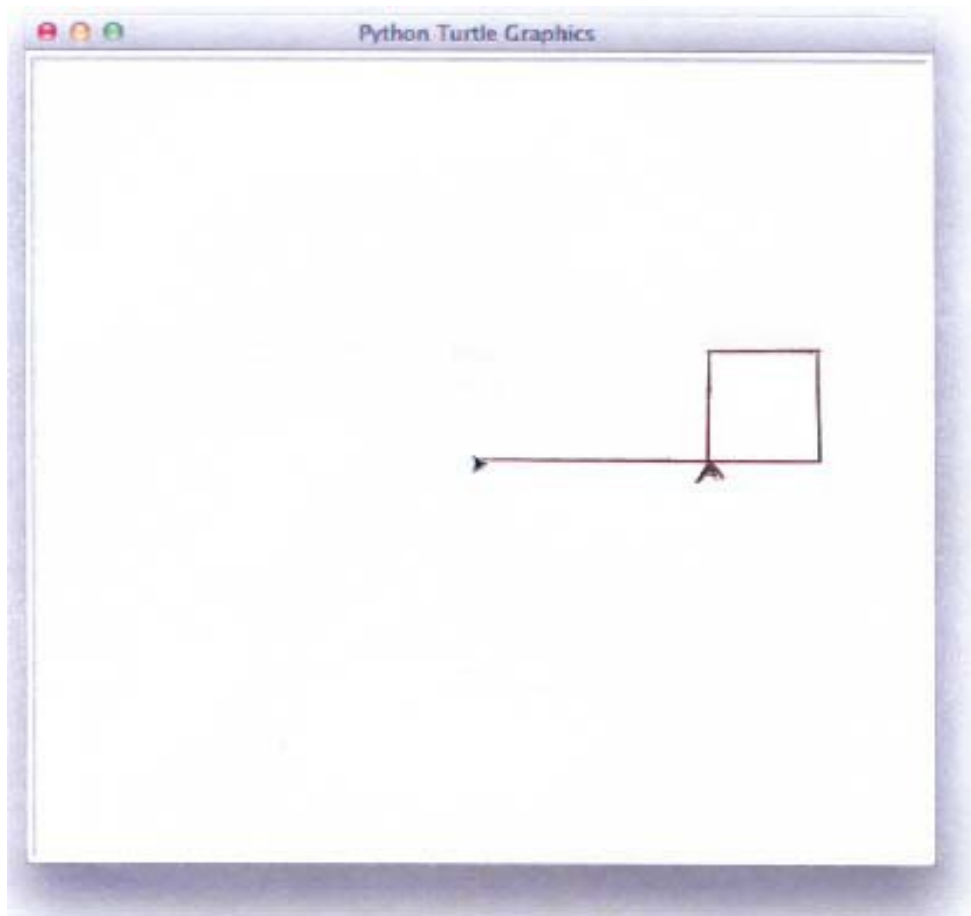


- (b) Draw the output produced by the turtle in the following Python program. The turtle starts in the middle of the window facing right and the window is approximately 400 steps wide.

```
import turtle

turtle.forward(100)
turtle.left(90)

sides = 4
while sides > 0:
    turtle.forward(50)
    turtle.right(90)
    sides = sides - 1
```



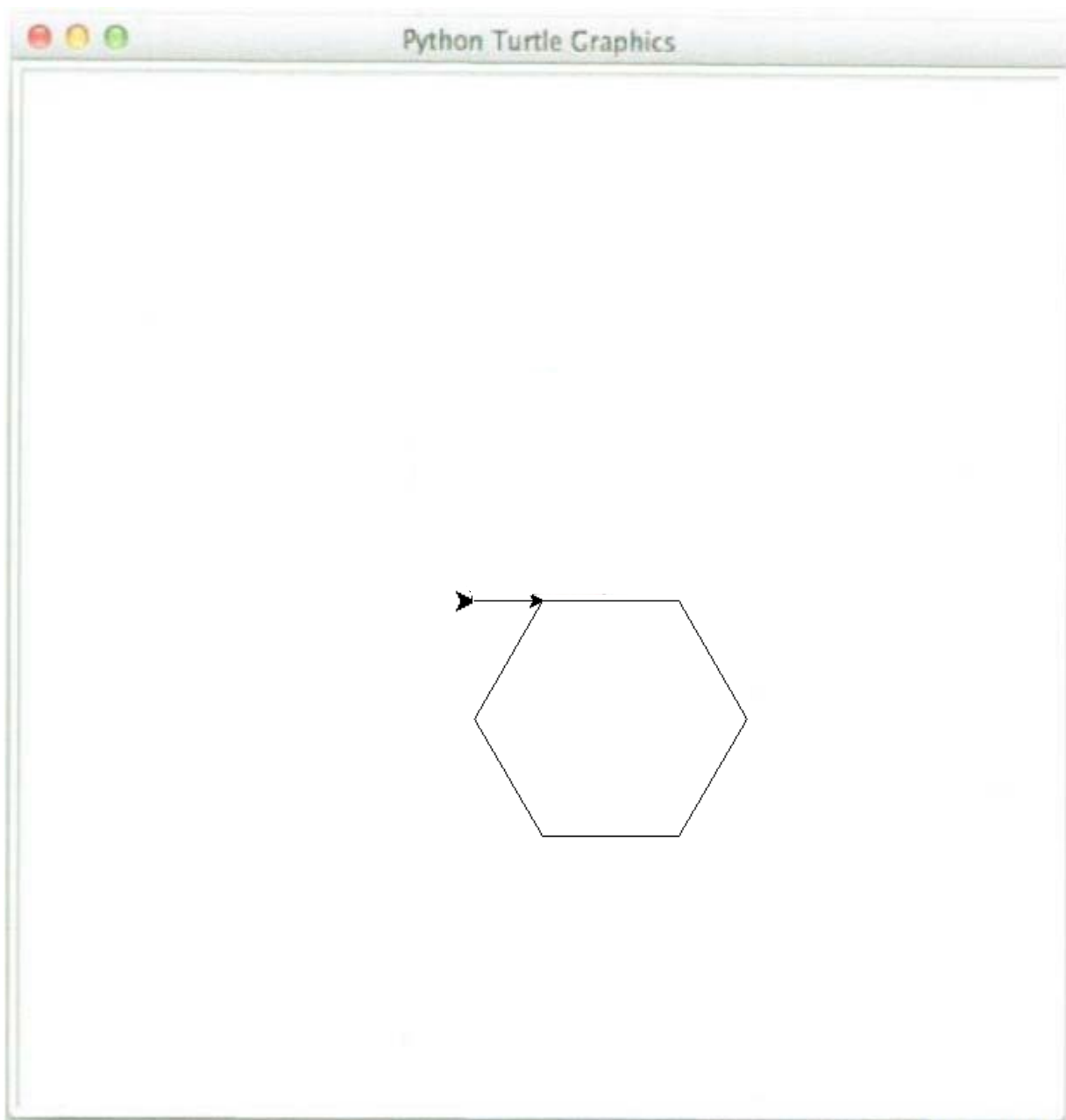
(3 marks)

On the following page, draw the output produced by the turtle in the following Python program. Assume that the turtle begins in the middle of the window facing right and that the window is approximately 800 steps wide.

```
import turtle

sides = 6
angle = 360/sides
count = 0

turtle.forward(50)
while count < sides:
    turtle.forward(100)
    turtle.right(angle)
    count = count + 1
```



(3 marks)

Show the output from the following Python program.

```
x = 4
y = 5
z = 21

while z >= x + y:
    print(z)
    if z % 5 == 0:
        z = z - y
    else:
        z = z - x
```

```
21
17
13
9
```

(3 marks)

Show the output from the following program.

```
numberEntered = int(input("Please enter a number: "))
counter = 1

while counter < numberEntered:
    if numberEntered % counter == 0:
        print(" %", counter)
    else:
        print("!%", counter)
    if counter * 2 >= numberEntered:
        print("Double!")
        counter = counter * 2
    counter = counter + 1
print("counter:", counter)
```

Please enter a number: **12**

% 1

% 2

% 3

% 4

!% 5

% 6

Double!

counter: 13

(5 marks)

Write a Python program which asks the user to enter a number (a positive integer) and then prints out the sum of the integers from 1 up to and including the number entered. The output should appear exactly as in the examples below. In the first example below, the user entered “4” and in the second, “10”.

Example 1:

```
Enter a number: 4
The sum up to 4 is 10
```

Example 2:

```
Enter a number: 10
The sum up to 10 is 55
```

```
#initialize variables
count = 1
end = int(input("Enter a number: "))
total = 0

#While loop calculates running total
while count <= end:
    total = total + count
    count = count + 1

#Display total
print("The sum up to",end,"is",total)
```

(4 marks)

Write a Python program that reads in a number of days and weeks and prints out the number of minutes remaining until that much time has elapsed. The following examples show the exact formatting expected for the prompts. Your program must produce the same output as shown below given the input shown below.

Example 1:

```
How many weeks? 2
And how many days? 4
Just wait 25920 minutes!
```

Example 2:

```
How many weeks? 0
And how many days? 1
Just wait 1440 minutes!
```

```
#Getting User Input
weeks = int(input("How many weeks? "))
days = int(input("And how many days? "))

#Conversion factors
weekToDays = 7
dayToHour = 24
hourToMinute = 60

#Calculation
totalDays = weeks*weekToDays+days
totalHours = totalDays*dayToHour
totalMinutes = totalHours*hourToMinute

#Display Output
print("Just wait",totalMinutes,"minutes!")
```

(4 marks)