

Name _____

CPADS Reading Activity II

For each program, sketch what output you think the above program will produce. For references, the turtle graphics library functions are defined below.

`fd(t, length)` – moves turtle `t` forward `length` units
`bk(t, length)` – moves turtle `t` backward `length` units
`lt(t, angle)` – turns turtle `t` `angle` degrees to the left
`rt(t, angle)` – turns turtle `t` `angle` degrees to the right
`pd(t)` – starts drawing for turtle `t` (pen down)
`pu(t)` – stops drawing for turtle `t` (pen up)

Program #1

```
# Load TurtleWorld functions
from TurtleWorld import *

def doSomething(t, height):
    pu(t)
    bk(t, height/4)
    lt(t, 90)
    bk(t, height/2)

    pd(t)
    fd(t, height)
    rt(t, 90)
    fd(t, height/2)
    rt(t, 90)
    fd(t, height)

    pu(t)
    bk(t, height/2)
    rt(t, 90)

    pd(t)
    fd(t, height/2)

def main():
    # Create TurtleWorld and Turtle objects
    world = TurtleWorld()
    turtle = Turtle()

    height = 50
    doSomething(turtle, (3*height)/5)

main()
```

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Assuming the turtle begins in the center of the screen, sketch what output you think the above program will produce?

Program #2

```
def doSomething(val1, val2, val3):
    return val1 + val2 + val3

def doSomethingElse(val1, val2):
    return val1 / val2

def main():
    # Define variables
    num1 = 100
    num2 = 200
    num3 = 300

    # Do computation
    result1 = doSomething(num1, num2, num3)
    result2 = doSomethingElse(result1, 3)

    # Print output
    print(result2)

main()
```

In English, describe what the program above does. What value does the print statement output?