

Team: \_\_\_\_\_

Team Members:

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## 1 Interpreting Programs

What do the following programs print?

**A.**

```
# assume the user enters 6
num = int(input("Enter a number: "))
total = num * 10
print(total)
```

**B.**

```
# assume the user enters 'Dogs'
message = input("Enter a message: ")
print(message[3])
```

**C.**

```
x = 7
y = x + 1
y = y * 2
z = x + y
print(z)
```

**D.**

```
a = 3
b = 4
c = a + 2 * (b + 5)
print(c)
```

## 2 Spot the Errors

What is wrong with the following programs?

**A.**

```
cost = input("Enter the cost: ")
tax = 0.053 * cost
print("Tax is" tax)
```

**B.**

```
input("Enter your name: ")
print("Hello", name)
```

**C.**

```
length = int(input("Enter length: "))
width = int(input("Enter width: "))
length * width = area
print(area)
```

**D.**

```
age = 2019 - born
born = float(input("Enter year you were born: "))
print("You are about", age, "years old.")
```

### 3 Writing Programs

**A.** Write a program to convert from feet to meters. There are 3.28084 feet in one meter. First read in the number of feet, do the calculation to find how many meters that is, and then print the result.

**B.** Write a program to solve the problem of adding up the numbers from 1 to a given stopping point. First read in the number  $n$  to stop at. Then, use the formula  $\frac{n \times (n+1)}{2}$  to figure out the sum of the numbers. Then print the answer.

**C.** Write a program to read in the radius of a circle from the user and print out the area. The area of a circle can be computed as  $A = \pi \cdot R^2$

**D.** Write a program to read in the user's first name and last name, and print out their initials. For example, if I put in "Ian" and "Finlayson" it should print out "I.F."

**E.** Write a program to print the average of 4 numbers that the user gives. You should read in the 4 numbers, compute the average, and then print the answer.