

CSCA08H Winter 2022 Worksheet: Variable Assignment Statements

1. Changing variable values

- (a) Suppose that you have evaluated some code that sets variable `k` to refer to some value.

Write an assignment statement that creates a new variable `j` that refers to three times `k`'s value:

$$\underline{j = 3 * k}$$

- (b) Consider this code:

```
x = 4  
y = 5  
x = 2
```

After the code above is executed, to which value does `x` refer?

2

After the code above is executed, to which value does `y` refer?

5

- (c) Consider this code:

```
x = 4  
y = x + 2  
x = y + 1
```

After the code above is executed, to which value does `x` refer?

7

After the code above is executed, to which value does `y` refer?

6

2. Swapping variable values *An extra exercise to try at home.*

Assume that variables `a` and `b` have been assigned `int` values. Write code to swap which values `a` and `b` refer to: after your statements are executed, `a` should refer to the value that `b` used to refer to, and `b` should refer to the value that `a` used to refer to. Hint: use a third variable.

```
temp = a  
a = b  
b = temp
```

Once you have written the code, trace your code using the memory model to confirm that it correctly swaps the values: