

## 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:

`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: