

## CSCA08H Winter 2022 Worksheet: Variable Assignment Memory Model

For each of the following code snippets, fill in the memory model diagram on the right to reflect the state of memory after the code is executed. In each case, we begin with the state where **a** has already been assigned the value 5. You may not need to use all of the boxes.

<pre>a = 5 b = 4 c = 6</pre>	<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"><u>a</u></div> <div style="border: 1px solid black; padding: 5px; display: inline-block;">id1</div> <div style="margin: 0 10px;">→</div> <div style="border: 1px solid black; padding: 5px; display: inline-block;">id1: int 5</div> </div> <div style="margin-top: 10px;"> <div style="border: 1px solid black; width: 80px; height: 30px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; width: 80px; height: 30px;"></div> </div> <div style="margin-top: 10px;"> <div style="border: 1px solid black; width: 80px; height: 30px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; width: 80px; height: 30px;"></div> </div>
<pre>a = 5 a = 3 b = a</pre>	<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"><u>a</u></div> <div style="border: 1px solid black; padding: 5px; display: inline-block;">id1</div> <div style="margin: 0 10px;">→</div> <div style="border: 1px solid black; padding: 5px; display: inline-block;">id1: int 5</div> </div> <div style="margin-top: 10px;"> <div style="border: 1px solid black; width: 80px; height: 30px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; width: 80px; height: 30px;"></div> </div> <div style="margin-top: 10px;"> <div style="border: 1px solid black; width: 80px; height: 30px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; width: 80px; height: 30px;"></div> </div>
<pre>a = 5 b = a + 2 a = 10</pre>	<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"><u>a</u></div> <div style="border: 1px solid black; padding: 5px; display: inline-block;">id1</div> <div style="margin: 0 10px;">→</div> <div style="border: 1px solid black; padding: 5px; display: inline-block;">id1: int 5</div> </div> <div style="margin-top: 10px;"> <div style="border: 1px solid black; width: 80px; height: 30px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; width: 80px; height: 30px;"></div> </div> <div style="margin-top: 10px;"> <div style="border: 1px solid black; width: 80px; height: 30px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; width: 80px; height: 30px;"></div> </div>