

# Pseudocode

**Part A:** Convert the following pseudocode into Java source code.

	pseudocode	Java
1	A = 5 B = 10 if A < B then output A, " is less than ", B else output A, " is greater than ", B end if	
2	COUNT = 0 loop while COUNT < 20 output COUNT COUNT = COUNT + 2 end loop	
3	COUNT = 0 SUM = 0 loop until COUNT = 10 SUM = SUM + COUNT COUNT = COUNT + 1 end loop	

**Part B:** Convert the following flowcharts into pseudocode.

	flowchart	pseudocode
4	<pre>graph TD; A5[A = 5] --&gt; B10[B = 10]; B10 --&gt; Cond{if A &lt; B AND A mod 5 = 0 ?};</pre> <p>The flowchart starts with an assignment <math>A = 5</math>, followed by an assignment <math>B = 10</math>. This is followed by a decision diamond: "if <math>A &lt; B</math> AND <math>A \text{ mod } 5 = 0</math> ?". If the answer is NO, the process ends. If the answer is YES, it proceeds to an output shape "output A", which then loops back to the assignment <math>A = 5</math>.</p>	
5	<pre>graph TD; A1[A = 1] --&gt; Add1[A = A + 1]; Add1 --&gt; Cond1{A &lt;= 10?}; Cond1 -- NO --&gt; End; Cond1 -- YES --&gt; Cond2{A mod 2 = 0};</pre> <p>The flowchart starts with an assignment <math>A = 1</math>. It then enters a loop where it adds 1 to <math>A</math> (<math>A = A + 1</math>) and checks if <math>A \leq 10</math>. If <math>A &gt; 10</math>, the process ends. If <math>A \leq 10</math>, it checks if <math>A \text{ mod } 2 = 0</math>. If YES, it outputs <math>A</math> and loops back to the <math>A = A + 1</math> step. If NO, it loops back to the <math>A = A + 1</math> step.</p>	

**Part C:** Write pseudocode for the following problems.

6. Determine if two numbers are equal. If they are equal print "same" otherwise print "different".

7. A method returns true if a given string contains the letter "a" otherwise it returns false.