

## CS108L Computer Science for All

### Module 3 Netlogo Code Cheat Sheet

Command / Variable	Description
<b>reset-ticks</b>	Resets the tick counter to zero. Usually goes at the end of a setup procedure, and must come after <b>clear-all</b> .
<b>tick</b>	Advances the tick counter by one. If the tick counter has not been started yet with <b>reset-ticks</b> , an error results. Normally goes at the end of a <b>go</b> procedure.
<b>ticks</b>	Reports the current value of the tick counter. The result is always a positive number.
<b>random #</b>	<p>If # is positive, reports an integer selected uniformly at random from the interval [0,3).            If # is negative, reports an integer selected uniformly at random from the interval (-3,0].            If # is zero, the result is always 0.</p> <p><b>Example:</b>  <b>show random 3</b> ;; shows 0, 1, or 2 in the Command Center  <b>show random -3</b> ;; shows 0, -1, or -2 in the Command Center</p>
<b>set pcolor #</b> <b>set pcolor color_name</b> <b>set pcolor R# G# B#</b>	<p>The command line sets the patch color. Color can be represented either as a NetLogo color (a single number or name) or an RGB color (with separate numerical values for the amount of red, green, and blue).</p> <p><b>Example:</b>  <b>set pcolor 15</b> ;; all of these set the color of the patch to red  <b>set pcolor red</b>  <b>set pcolor 255 0 0</b></p>
<b>pxcor</b> <b>pycor</b>	<p>Reports the x-coordinate or y-coordinate of a patch</p> <p><b>Example:</b>  <b>ask patches</b>  <b>[</b>              <b>if pycor &lt; -5</b>            <b>[</b></p>

	<pre> set pcolor blue ;; sets all patches with a y-coordinate less than -5 to blue ] </pre>
<b>max-pxcor</b> <b>min-pxcor</b>	<p>Reports either the <b>max</b> or <b>min</b> coordinate along the x-axis (horizontal axis) of the NetLogo world. To get the max or min along the y-axis, use <b>max-pycor</b> or <b>min-pycor</b>. Note that min values are often negative numbers, depending on how the world is set up.</p> <p><b>Example:</b></p> <pre> create-turtles 1 [   setxy max-pxcor max-pycor ;; creates 1 turtle and places it in the upper right corner ] create-turtles 1 [   setxy min-pxcor max-pycor ;; creates another turtle and places it in the upper left corner ] </pre>
<b>random-pxcor</b> <b>random-pycor</b>	<p>Reports a value selected uniformly at random from the possible x or y coordinates in the NetLogo world.</p> <p><b>Example:</b></p> <pre> create-turtles 200 [   setxy random-pxcor max-pycor ;; creates 200 turtles and places them randomly ] ;; across the top of the NetLogo world </pre>