

Unit 3 Vocabulary (Missions 9-12)

Select the best computer science definition for each vocabulary word	
Logical operator	<ul style="list-style-type: none"> <li>a) The condition that controls a loop</li> <li>b) A way to loop through a list</li> <li><b>c) Operators that handle combinations of Boolean results: and / or</b></li> <li>d) Operators that create a Boolean expression: &lt;, &gt;, ==</li> </ul>
Function	<ul style="list-style-type: none"> <li>a) A type of iteration with a loop</li> <li><b>b) A named chunk of code you can run anytime by calling it</b></li> <li>c) A type of selection with an if statement</li> <li>d) A way to input information by pressing a button</li> </ul>
Argument	<ul style="list-style-type: none"> <li><b>a) The value passed into a function - information needed to complete a task</b></li> <li>b) A read-only version of a list</li> <li>c) A local variable in a function that gets a value when the function is called</li> <li>d) A variable used in a condition that determines when a loop will end</li> </ul>
Parameter	<ul style="list-style-type: none"> <li>a) The value passed into a function - information needed to complete a task</li> <li>b) A read-only version of a list</li> <li><b>c) A local variable in a function that gets a value when the function is called</b></li> <li>d) A variable used in a condition that determines when a loop will end</li> </ul>
Tuple	<ul style="list-style-type: none"> <li>a) The value passed into a function - information needed to complete a task</li> <li><b>b) A read-only version of a list</b></li> <li>c) A local variable in a function that gets a value when the function is called</li> <li>d) A variable used in a condition that determines when a loop will end</li> </ul>
Control variable	<ul style="list-style-type: none"> <li>a) The value passed into a function - information needed to complete a task</li> <li>b) A read-only version of a list</li> <li>c) A local variable in a function that gets a value when the function is called</li> <li><b>d) A variable used in a condition that determines when a loop will end</b></li> </ul>
Accelerometer	<ul style="list-style-type: none"> <li>a) Electronic circuits that are the heartbeat of the computer</li> <li>b) An electronic sensor that measures infrared and visible wavelengths</li> <li><b>c) A sensor chip that detects motion, impacts and orientation</b></li> <li>d) A number randomizer embedded on CodeX</li> </ul>
Light sensor	<ul style="list-style-type: none"> <li>a) Electronic circuits that are the heartbeat of the computer</li> <li><b>b) An electronic sensor that measures infrared and visible wavelengths</b></li> <li>c) A sensor chip that detects motion, impacts and orientation</li> <li>d) A number randomizer embedded on CodeX</li> </ul>
Computer clock	<ul style="list-style-type: none"> <li><b>a) Electronic circuits that are the heartbeat of the computer</b></li> <li>b) An electronic sensor that measures infrared and visible wavelengths</li> <li>c) A sensor chip that detects motion, impacts and orientation</li> <li>d) A number randomizer embedded on CodeX</li> </ul>
ADC	<ul style="list-style-type: none"> <li>a) A sensor on CodeX</li> <li>b) A way to input information by pressing a button</li> <li>c) A type of electricity</li> <li><b>d) Analog to digital conversion</b></li> </ul>

Unit 3 Concepts and Coding (Missions 9-12)

<p>The code is an example of:</p> <pre>if choice == 1 and x &lt; 120:     color = RED</pre>	<p>a) Function b) Parameter c) Control variable <b>d) Logical operator</b></p>
<p>When will the loop stop?</p> <pre>index = 0 while index &lt; 5:     index = index + 1</pre>	<p><b>a) When index = 5</b> b) When index = 4 c) When index = 6 d) When index is incremented</p>
<p>How many times will the loop execute?</p> <pre>index = 0 while index &lt; 8:     display.show(index)     index = index + 1</pre>	<p>a) 1 time b) 7 times <b>c) 8 times</b> d) Infinite loop</p>
<p>The highlighted code is an example of:</p> <pre>def turn_on(pix):     count = 0     while count &lt; pix:         pixels.set(pix, GREEN)         count = count + 1  turn_on(2)</pre>	<p>a) A function definition b) A function call c) An argument <b>d) A parameter</b></p>
<p>The highlighted code is an example of:</p> <pre>def turn_on(pix):     count = 0     while count &lt; pix:         pixels.set(pix, GREEN)         count = count + 1  turn_on(2)</pre>	<p><b>a) A loop control variable</b> b) A function call c) An argument d) A parameter</p>
<p>The highlighted code is an example of:</p> <pre>def turn_on(pix):     count = 0     while count &lt; pix:         pixels.set(pix, GREEN)         count = count + 1  turn_on(2)</pre>	<p>a) A loop control variable <b>b) Increment a control variable</b> c) An argument d) A parameter</p>

<p>The highlighted code is an example of:</p> <pre>def turn_on(pix):     count = 0     while count &lt; pix:         pixels.set(pix, GREEN)         count = count + 1  turn_on(2)</pre>	<ul style="list-style-type: none"> <li>a) A function definition</li> <li>b) A function call</li> <li><b>c) An argument</b></li> <li>d) A parameter</li> </ul>
<p>The highlighted code is an example of:</p> <pre>def turn_on(pix):     count = 0     while count &lt; pix:         pixels.set(pix, GREEN)         count = count + 1  turn_on(2)</pre>	<ul style="list-style-type: none"> <li>a) A function definition</li> <li><b>b) A function call</b></li> <li>c) An argument</li> <li>d) A parameter</li> </ul>
<p>The highlighted code is an example of:</p> <pre>def turn_on(pix):     count = 0     while count &lt; pix:         pixels.set(pix, GREEN)         count = count + 1  turn_on(2)</pre>	<ul style="list-style-type: none"> <li><b>a) A function definition</b></li> <li>b) A function call</li> <li>c) An argument</li> <li>d) A parameter</li> </ul>
<p>What code correctly defines a function with a parameter?</p>	<ul style="list-style-type: none"> <li><b>a) def turn_on(pix):</b></li> <li>b) def turn_on(3)</li> <li>c) turn_on(3)</li> <li>d) turn_on(pix):</li> </ul>
<p>What code correctly calls a function with a parameter?</p>	<ul style="list-style-type: none"> <li>a) def turn_on(pix):</li> <li>b) def turn_on(3)</li> <li><b>c) turn_on(3)</b></li> <li>d) turn_on(pix):</li> </ul>
<p>What variable is the loop control variable?</p> <pre>def display_score(num):     end_value = 10     count = 0     score = num     while count &lt; end_value:         display.print(score)         count = count + 1</pre>	<ul style="list-style-type: none"> <li>a) num</li> <li>b) end_value</li> <li>c) score</li> <li><b>d) count</b></li> </ul>
<p>What code will turn off all pixels?</p>	<ul style="list-style-type: none"> <li>a) pixels.off()</li> <li><b>b) pixels.set([BLACK, BLACK, BLACK, BLACK])</b></li> <li>c) display.pixels_off()</li> <li>d) pixels.set([BLACK])</li> </ul>

<p>What programming concept can you use to turn on all pixels with one line of code?</p>	<p>a) A variable  b) A function  c) A parameter  <b>d) A list</b></p>
<p>What code will turn the display screen black?</p>	<p><b>a) display.clear()</b>  b) clear.display()  c) display.black()  d) display.off()</p>
<p>What function will get the current clock time?</p>	<p>a) time()  b) ticks()  <b>c) ticks_ms()</b>  d) clicks()</p>
<p>What function will subtract two clock times?</p>	<p>a) ticks_subtract()  <b>b) ticks_diff()</b>  c) diff_ticks()  d) ticks_ms()</p>
<p>What function returns data from the accelerometer?</p>	<p>a) read.accel()  b) accel.data()  <b>c) accel.read()</b>  d) return.accel()</p>
<p>Given this code, what direction value will "tilt" be assigned?</p> <pre>val = accel.read() tilt = val[1]</pre>	<p>a) x  <b>b) y</b>  c) z  d) (x, y, z)</p>
<p>Which of the following values is NOT a tuple?</p>	<p><b>a) "Hello"</b>  b) (x, y)  c) (red, green, blue)  d) (x, y, z)</p>
<p>What is the purpose of this code?</p> <pre>x = CENTER</pre>	<p>a) A variable that determines the center of the circle  b) A variable that determines the center of the display  c) A variable that is assigned the tilt of the circle  <b>d) A variable that is assigned the x position of the circle</b></p>
<p>What is the purpose of this code:</p> <pre>display.draw_circle(x, CENTER, 15, WHITE) x = CENTER + degrees display.draw_circle(x, CENTER, 15, ORANGE)</pre>	<p>a) Determines the center of the display  b) Draws a new circle and then erases it  c) Draws two circles on the display  <b>d) Erases the circle, gets a new value for x, and then draws a new circle</b></p>
<p>What function is used to read a light sensor?</p>	<p>a) read.light()  <b>b) light.read()</b>  c) read()  d) light()</p>

What function is used to set all pixels the same color?	a) pixels.set(BLUE) b) pixels.set(0, BLUE) <b>c) pixels.fill(BLUE)</b> d) fill.pixels(BLUE)
What code will vary the brightness of pixels?	a) pixels.BLUE(20) b) fill.pixels(RED, brightness=20) c) brightness(20) <b>d) pixels.fill(BLUE, brightness=20)</b>