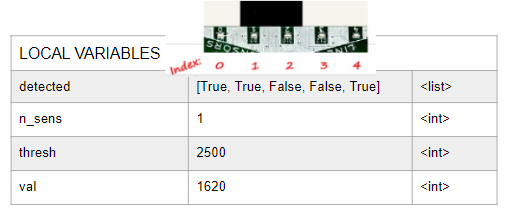
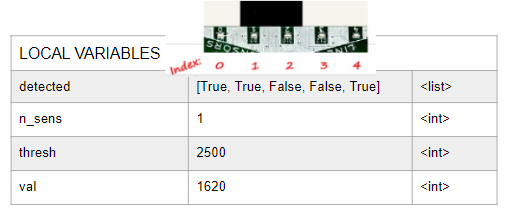
Review Kahoots for Unit 3

Use this pic for Mission 6 Review questions 1-4: 

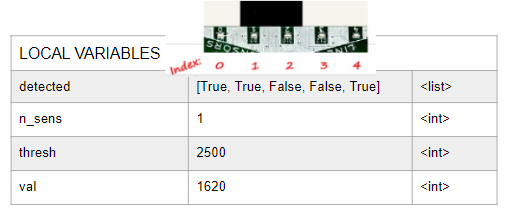
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| **Mission 6 - Line Follower** | |
| What is the value of detected[2]? | 1. True 2. False 3. 0 4. 1 |
| What is the value of detected[n\_sens] | 1. True 2. False 3. 0 4. 1 |
| What is the final value of n\_sens? | 1. 4 2. 5 3. [True, True, False, False, True] 4. True |
| For n\_sens, val < thresh returns True. What type of line is it detecting? | 1. White line on dark ground 2. Black line on light ground 3. Not enough information 4. Could be either one |
| If the ‘bot’s sensors 1 and 2 are detecting a line, what is the value of “detected”? | 1. detected = [False, False, False, False, False] 2. detected = [True, True, True, True, True] 3. detected = [False, True, True, False, False] 4. detected = [True, False, False, True, True] |
| What is the data type:  x = 5 | 1. int 2. float 3. list 4. tuple |
| What is the data type:  x = (0, 1, 1, 0, 0) | 1. int 2. float 3. list 4. tuple |
| What is the data type:  x = [True, True, True, False, False] | 1. int 2. float 3. list 4. tuple |
| What is the data type:  x = 1.245 | 1. int 2. float 3. list 4. tuple |
| What code accesses a single value from a list or tuple? | 1. vals 2. vals = (0, 1, 1, 0, 0) 3. vals[3] 4. vals(3) |
| What will be printed on the console? | 1. An error occurs 2. detected 3. not detected 4. detected followed by not detected |
| What does the highlighted code do? | 1. Uses the tuple “vals” to turn on or off line sensor LEDS 2. Turns on the one LED at index “vals” 3. Assigns a True value to “vals” for each LED that is currently on 4. Causes an error |
| What is the value of x? | 1. 45 2. -22 3. 87 4. 12.75 |
| What is the value of x? | 1. 45 2. 22 3. -45 4. -22 |
| What is the value of x? | 1. 87 2. 12.75 3. 12 4. 13 |

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| **Mission 7 - Hot Pursuit** | |
| What is returned by the function prox.detect() | 1. Either True or False 2. A tuple of two Boolean values 3. A tuple of 0 and 1 4. An integer between 0 and 4095 |
| LEFT is assigned what value? | 1. True 2. 0 3. 1 4. False |
| What are the settings of the “power” parameter of prox.detect()? | 1. 1-8 2. 0-7 3. 1-100 4. True or False |
| What are the settings of the “threshold” parameter of prox.detect()? | 1. 1-8 2. 0-7 3. 1-100 4. True or False |
| What is the purpose of prox.range()? | 1. Determine if an object is in front of the ‘bot 2. Move the ‘bot a specified distance 3. Determine the lowest power needed to detect a reflection 4. Determine the lowest threshold where a reflection is detected |
| What does prox.range() return? | 1. A tuple with the values True or False 2. A tuple with two integers, up to 100 3. True or False 4. The best range for both sensors |
| If prox.range() doesn’t detect any reflection, what does it return? | 1. False 2. 0 3. (-1, -1) 4. (False, False) |
| What is the final value of det? | 1. 75 2. 50 3. 0 4. True |
| What line of code is needed when updating a global variable in a function? | 1. global thresh 2. local thresh 3. thresh = 0 4. update thresh |
| What is the smallest value that can be assigned to “power”? | 1. 0 2. 1 3. 8 4. 100 |
| What is the highest value that can be assigned to “power”? | 1. 0 2. 1 3. 8 4. 100 |
| When will the loop end? | 1. When power == 8 2. When threshold < 100 3. When either power ==8 or threshold < 100 4. Won’t end, infinite loop |
| What is the final value of go\_motors? | 1. False 2. True 3. No 4. An error occurs |
| About how long does it take for the code to read prox.detect() 100 times? | 1. 1/10 seconds 2. 10 seconds 3. 100 seconds 4. 1 second |
| What are the possible values for “turn\_ratio”? | 1. True and False 2. 0-1 3. All numbers between -1 and 1 4. All numbers between 0-100 |

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| **Unit 3 Vocabulary Review/Test (Missions 6-7: “The computer science definition of …”)**  *(A total of 15 terms introduced in the missions, use the ones you want–same terms for review/ test)* | |
| list | 1. A value that is an integer 2. A sequence of indexed items you can change 3. A sequence of indexed items that are immutable 4. A value that is a decimal |
| tuple | 1. A value that is an integer 2. A sequence of indexed items you can change 3. A sequence of indexed items that are immutable 4. A value that is a decimal |
| int | 1. A value that is an integer 2. A sequence of indexed items you can change 3. A sequence of indexed items that are immutable 4. A value that is a decimal |
| float | 1. A value that is an integer 2. A sequence of indexed items you can change 3. A sequence of indexed items that are immutable 4. A value that is a decimal |
| or | 1. A logical operator that inverts the Boolean operand 2. Evaluates to True only if both conditions are True 3. Evaluates to True if one or both conditions are True 4. A named chunk of code that accomplishes a task |
| not | 1. A logical operator that inverts the Boolean operand 2. Evaluates to True only if both conditions are True 3. Evaluates to True if one or both conditions are True 4. A named chunk of code that accomplishes a task |
| function | 1. A logical operator that inverts the Boolean operand 2. Evaluates to True only if both conditions are True 3. Evaluates to True if one or both conditions are True 4. A named chunk of code that accomplishes a task |
| Hard coded values | 1. Specific numbers used in code that should be constants 2. Variables defined inside a function 3. Variables defined outside a function in the main program 4. A list of variables declared in a function definition that receive values |
| parameters | 1. Specific numbers used in code that should be constants 2. Variables defined inside a function 3. Variables defined outside a function in the main program 4. A list of variables declared in a function definition that receive values |
| globals | 1. Specific numbers used in code that should be constants 2. Variables defined inside a function 3. Variables defined outside a function in the main program 4. A list of variables declared in a function definition that receive values |
| locals | 1. Specific numbers used in code that should be constants 2. Variables defined inside a function 3. Variables defined outside a function in the main program 4. A list of variables declared in a function definition that receive values |
| auto-calibrate | 1. The brightness of CodeBot’s IR flashlight 2. Set the sensors to adapt to their environment by setting parameters 3. How much light is needed to detect an object (from 1 to 100) 4. Infrared sensors that can detect nearby objects based on reflected light |
| Proximity sensors | 1. The brightness of CodeBot’s IR flashlight 2. Set the sensors to adapt to its environment by setting parameters 3. How much light is needed to detect an object (from 1 to 100) 4. Infrared sensors that can detect nearby objects based on reflected light |
| Detection sensitivity | 1. The brightness of CodeBot’s IR flashlight 2. Set the sensors to adapt to its environment by setting parameters 3. How much light is needed for to detect an object (from 1 to 100) 4. Infrared sensors that detect nearby objects from reflected light |
| Emitter power level | 1. The brightness of CodeBot’s IR flashlight 2. Set the sensors to adapt to its environment by setting parameters 3. How much light is needed for to detect an object (from 1 to 100) 4. Infrared sensors that can detect nearby objects based on reflected light |

Use this pic for Mission 6 Review question 1: 

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| **Unit 3 Concepts and Coding Kahoot Review (Missions 6, 7) /***(questions from 2 review kahoots)* | |
| What is the value of detected[2]? | 1. True 2. False 3. 0 4. 1 |
| What is the final value of n\_sens? | 1. 4 2. 5 3. [True, True, False, False, True] 4. True |
| If the ‘bot’s sensors 1 and 2 are detecting a line, what is the value of “detected”? | 1. detected = [False, False, False, False, False] 2. detected = [True, True, True, True, True] 3. detected = [False, True, True, False, False] 4. detected = [True, False, False, True, True] |
| What is the data type:  x = 5 | 1. int 2. float 3. list 4. tuple |
| What is the data type:  x = (0, 1, 1, 0, 0) | 1. int 2. float 3. list 4. tuple |
| What is the data type:  x = [True, True, True, False, False] | 1. int 2. float 3. list 4. tuple |
| What is the data type:  x = 1.245 | 1. int 2. float 3. list 4. tuple |
| What code accesses a single value from a list or tuple? | 1. vals 2. vals = (0, 1, 1, 0, 0) 3. vals[3] 4. vals(3) |
| What will be printed on the console? | 1. An error occurs 2. detected 3. not detected 4. detected followed by not detected |
| What does the highlighted code do? | 1. Uses the tuple “vals” to turn on or off line sensor LEDS 2. Turns on the one LED at index “vals” 3. Assigns a True value to “vals” for each LED that is currently on 4. Causes an error |
| What is the value of x? | 1. 45 2. -22 3. 87 4. 12.75 |
| What is the value of x? | 1. 45 2. 22 3. -45 4. -22 |
| What is the value of x? | 1. 87 2. 12.75 3. 12 4. 13 |
| What is returned by the function prox.detect() | 1. Either True or False 2. A tuple of two Boolean values 3. A tuple of 0 and 1 4. An integer between 0 and 4095 |
| LEFT is assigned what value? | 1. True 2. 0 3. 1 4. False |
| What is the purpose of prox.range()? | 1. Determine if an object is in front of the ‘bot 2. Move the ‘bot a specified distance 3. Determine the lowest power needed to detect a reflection 4. Determine the lowest threshold to detect a reflection |
| What is the final value of det? | 1. 75 2. 50 3. 0 4. True |
| What line of code is needed when updating a global variable in a function? | 1. global thresh 2. local thresh 3. thresh = 0 4. update thresh |
| What is the highest value that can be assigned to “power”? | 1. 0 2. 1   c) 8  d) 100 |
| What is the final value of go\_motors? | 1. False 2. True 3. No 4. An error occurs |

Use this pic for Unit 3 Concepts and Coding Test Question 1: 

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| **Unit 3 Concepts and Coding Test (Missions 6, 7) /***(review questions with modifications)* | |
| What is the value of detected[1] | 1. True 2. False 3. 0 4. 1 |
| What is the final value of n\_count? | 1. 0 2. 1 3. 7 4. 8 |
| If the ‘bots sensors 2 and 3 are detecting a line, what is the value of “detected”? | 1. detected = [0, 1, 2, 3, 4] 2. detected = [False, True, True, False, False] 3. detected = [False, False, True, True, False] 4. detected = [0, 0, 1, 1, 1] |
| What is the data type of:  x = 0.15 | 1. int 2. float 3. list 4. tuple |
| What is the data type of:  x = [0, 1, 1, 0, 0] | 1. int 2. float 3. list 4. tuple |
| What is the data type of:  x = 0 | 1. int 2. float 3. list 4. tuple |
| What is the data type of:  x = (True, True) | 1. int 2. float 3. list 4. tuple |
| What code accesses a single value from a list or tuple? | 1. vals 2. vals(1) 3. vals[1] 4. vals = (0, 1) |
| What will be printed on the console? | 1. Detected 2. Not detected 3. Detected followed by not detected 4. An error occurs |
| What does the highlighted code do? | 1. Turns on the one LED at index “vals” 2. Uses the tuple “vals” to turn on or off line sensor LEDs 3. Assigns a True value to “vals” for each LED that is on 4. Causes an error |
| What is the value of x? | 1. 25 2. -25 3. 10 4. -10 |
| What is the value of x? | 1. 25 2. 10 3. 58 4. 14.6 |
| What is the value of x? | 1. 58 2. 14.6 3. 14 4. 15 |
| What is returned by the function “prox.detect()”? | 1. A tuple of 0 or 1 2. True or False 3. A tuple of two Boolean values 4. An integer between 0 and 4095 |
| RIGHT is assigned what value? | 1. 0 2. 1 3. True 4. False |
| What is the purpose of “prox.range()”? | 1. Determine the lowest threshold needed to detect a reflection 2. Determine the lowest power needed to detect a reflection 3. Determine if an object is in front of the CodeBot 4. Move the CodeBot a specified distance |
| What is the final value of “det”? | 1. 50 2. 60 3. 0 4. True |
| What line of code is needed when updating a global variable in a function? | 1. local power 2. global power 3. power = True 4. power global |
| What is the lowest value that can be assigned to “power” when the while loop ends? | 1. 0 2. 1 3. 8 4. 100 |
| What is the final value of “go\_motors”? | 1. True 2. False 3. No 4. An error occurs |