Mission 13 - Going the Distance Review Questions

What code will read a wheel encoder?	a. val = enc.read(True) b. val = read.enc(0) c. val = enc.read(LEFT) d. enc.read(val)
What value is returned by the wheel encoder?	a. A Boolean: True or False b. An integer from -32767 to +32768 c. A float from -32767 to +32768 d. An integer from 0 to 4095
Which statement is True?	a. 5 / 3 == 5 // 3 b. 5 // 3 > 1 c. 5 // 3 == 2 d. 5 // 3 < 5 / 3

Why does this code throw an error?
 	
``python
n = val/100
print(val, n * '*')
``
	a. You can't divide val by 100
	b. You can't multiply a string by a float
	c. You can't multiply a string with a number
	d. You can't print a number and then a string

Given this code, what will print?
 	
``python
message = '#' * 5
print(message)
``
	a. #####
	b. '#' * 5
	c. 'message'
	d. An error will occur

The code is an example of:
 	
``python
count += 1
``
	a. Cascaded assignment
	b. Augmented assignment
	c. Formatted output
	d. Feedback loop

What is printed by the following code?
 	
``python
count = 3
count += 1
count *= 2
print(count)
``
	a. 4
	b. 8
	c. 2
	d. 3

What does this code do?
 	
``python
was_slot = False
val = enc.read(LEFT)
is_slot = val > SLOT_THRESHOLD
if is_slot != was_slot:
    count += 1
    was_slot = is_slot
``
	a. Reads the encoder everytime there is a new slot
	b. When a new slot is found, it increments the counter
	c. When a reading is different, it increments count and flips is_slot
	d. When the reading is the same, it increments count and flips is_slot

What does this code do?
 	
``python
cm * (COUNTS_PER_REV / WHEEL_CIRC_CM)
``
	a. Converts counts to centimeters
	b. Converts centimeters to counts
	c. Calculates the track circumference
	d. Calculates the speed

What does this code do?
 	
``python
counts * WHEEL_CIRC_CM / COUNTS_PER_REV
``
	a. Converts counts to centimeters
	b. Converts centimeters to counts
	c. Calculates the track circumference

	d. Calculates the speed
What does this code do? `round(dist_cm / tm_sec)`	a. Converts counts to centimeters b. Converts centimeters to counts c. Calculates the track circumference **d. Calculates the speed**
What powers are used to rotate the CodeBot clockwise?	a. LEFT and RIGHT are both negative b. LEFT is negative and RIGHT is positive **c. LEFT is positive and RIGHT is negative** d. Both positive, but LEFT is more than RIGHT
Which of the following is FALSE?	a. abs(-5) / 5 == 1 **b. -5 / abs(-5) == 1** c. 5 / abs(-5) == 1 d. -5 / abs(5) == -1
What is printed by the following code: `print(f'{math.pi:.2f}')`	**a. 3.14** b. 3.142 c. 03.14 d. math.pi

How much time passes before the loop breaks?
 	
``tm = ticks_ms() + 500
while True:
    if ticks_ms() > tm:
        break```
	a. 1 second
	b. ½ second
	c. 1 millisecond
	d. 5 milliseconds

In the feedback loop for cruise control, the input is:	a. cur_speed **b. target_speed** c. ratio d. count
In the feedback loop for cruise control, the output is:	**a. cur_speed** b. target_speed c. ratio d. count
In the feedback loop for cruise control, the feedback come from:	a. The wheels b. The motors **c. The wheel encoders** d. Line sensors
In the feedback loop for cruise control, the system is:	a. The wheel encoders b. The line sensors c. The CodeBot **d. The motors**
What does this code do? ```err = target_speed - cur_speed power += err * Kp motors.run(LEFT, power) motors.run(RIGHT, power)```	a. Causes the CodeBot to brake b. Causes the CodeBot to move forward c. Calculates the speed for CodeBot **d. Provides constant feedback when in a loop**