5.11. Chapter Assessment - Turtle and Object Mechanics

Check your understanding

turtle-11-1: What are correct ways to tell a turtle named Tex to move forward 20 pixels? Select as many as apply.

- [x] A. Tex.forward(20)
- [ ] B. forward() + 20
- [ ] C. forward(20)
- [ ] D. forward(20).Tex
- [x] E. Tex.forward(10 + 10)

Check me Compare me

✔ Correct.
A. This is a correct way to move a turtle forward.
E. You are allowed to write expressions inside of methods, so this is correctly written.

Activity: 1 -- Multiple Choice (assess_question1_3_1_1_1)

turtle-11-2: Which is the correct way to make a new instance of the Turtle class?

- ( ) A. turtle(Turtle)
- (•) B. turtle.Turtle()
- ( ) C. Turtle.turtle()
- ( ) D. Turtle(turtle)

Check me Compare me

✔ Yes, this is the correct way.

Activity: 2 -- Multiple Choice (assess_question1_3_1_1_2)

turtle-11-3: What does each instance of the Turtle class represent?

- ( ) A. The turtle class.
- ( ) B. The same turtle that is used in each drawing your programs make.
- (•) C. A unique 'turtle' that you can use to draw.

Check me Compare me

✔ Yes, an instance of the turtle class represents a unique turtle. The turtle class is like a stencil or mold that can be used to make as many turtles as you would like.

Activity: 3 -- Multiple Choice (assess_question1_3_1_1_3)

turtle-11-4: Select all of the following things that methods can do:

- [x] A. Change the value of an attribute.
- [x] B. Return values.
- [x] C. Create new attributes of an instance and set their values.
- [ ] D. Delete object instances.
- [ ] E. None of the above.

Check me Compare me

✔ Correct.
A. Methods can change the value that is associated with an attribute.
B. Methods can return values.
C. Attributes do not need to be pre-declared; any code can add a new attribute to an instance just by assigning a value to it.

Activity: 4 -- Multiple Choice (assess_question1_3_1_1_5)

turtle-11-5: For an instance of a class that is assigned to the variable `student`, what is the proper way to refer to the `title` attribute/instance variable?

- ( ) A. student.title()
- ( ) B. title.student()
- ( ) C. title.student
- ( ) D. student(title)
- (•) E. student.title

Check me Compare me

✔ Yes, this is the correct syntax to use.

Activity: 5 -- Multiple Choice (assess_question1_3_1_1_6)

turtle-11-6: What is the name of jane's attribute (not method) that is referred to in the following code?

```
import turtle

jane = turtle.Turtle()
jane.forward(20)
print(jane.x)
```

The attribute is

x

Check me | Compare me

Good work!

Activity: 6 -- Fill in the Blank (assess_question1_3_1_1_7)

turtle-11-7: What are the names of the instances in the following code? Please put one instance per blank space and enter them in the order that the computer would read them.

```
import turtle
wn = turtle.Screen()

jazz = turtle.Turtle()
jazz.forward(50)
jazz.right(90)
pop = turtle.Turtle()
pop.left(180)
pop.forward(76)
```

wn | jazz | pop

Check me | Compare me

- Good work!
- Good work!
- Good work!

Activity: 7 -- Fill in the Blank (assess_question1_3_1_1_8)

5.12. Chapter Assessment - Drawing with Turtle

Write code to draw a regular pentagon (a five-sided figure with all sides the same length).

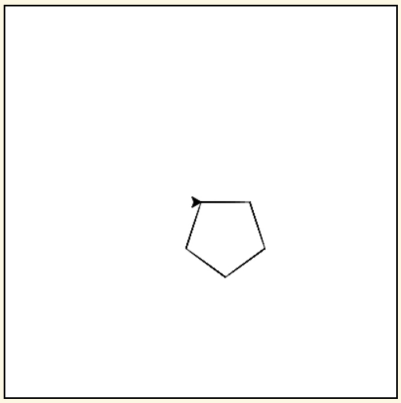
Save & Run | 5/13/2021, 7:48:57 PM - 3 of 3 | Show in CodeLens

```
import turtle

# creating turtle pen
t = turtle.Turtle()
# taking input for the no of the sides of the polygon
n = int(input("Enter the no of the sides of the polygon : "))
# taking input for the length of the sides of the polygon
l = int(input("Enter the length of the sides of the polygon : "))


for _ in range(n):
    turtle.forward(l)
    turtle.right(360 / n)

```



Activity: 8 -- ActiveCode (assess_ps_01_09a)

Write a program that uses the turtle module to draw something. It doesn't have to be complicated, but draw something different than we have done in the past. (Hint: if you are drawing something complicated, it could get tedious to watch it draw over and over. Try setting `.speed(10)` for the turtle to draw fast, or `.speed(0)` for it to draw super fast with no animation.)

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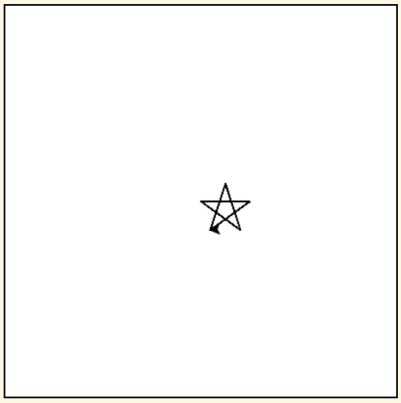
```
import turtle

star = turtle.Turtle()

for i in range(50):
    star.forward(50)
    star.right(144)

turtle.done()

```



Activity: 9 -- ActiveCode (assess_ps_01_09)

You have attempted 10 of 9 activities on this page

✔ Completed. Well Done!

5.10. Exercises">
ercises">
6. Sequences">

| Back to top