Solution Review: Implement Area and Perimeter Methods

This lesson discusses how to calculate the area and perimeter of a rectangle.

WE'LL COVER THE FOLLOWING

Solution:

The `area()` and `perimeter()` methods are written in lines 17-21. They simply take the values of `width()` and `height()` and perform the following calculations on them:

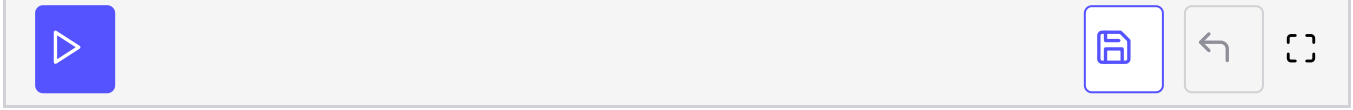
$$Area = width * height$$

$$Perimeter = 2 * width + 2 * height$$

This is shown in the code below:

```
class Rectangle:
  def __init__(self, x1, y1, x2, y2): # class constructor
    if x1<x2 and y1>y2:
      self.x1 = x1 # class variable
      self.y1 = y1 # class variable
      self.x2 = x2 # class variable
      self.y2 = y2 # class variable
    else:
      print("Incorrect coordinates of the rectangle!")

  def width(self):
    return self.x2-self.x1

  def height(self):
    return self.y1-self.y2

  def area(self):
    return self.width()*self.height()

  def perimeter(self):
    return 2 * self.width() + 2 * self.height()
```

```
    return 2 * self.width() + 2 * self.height()

# test your code
r = Rectangle (2, 7, 8, 4)
print("Area: " + str(r.area()))
print("Perimeter: " + str(r.perimeter()))
```



In the next lesson, you will do an exercise on the print method of classes.