Solution Review: Implement Getter Methods

This lesson gives the solution to the previous exercise - implementing the getter methods to calculate the width and height of a rectangle.

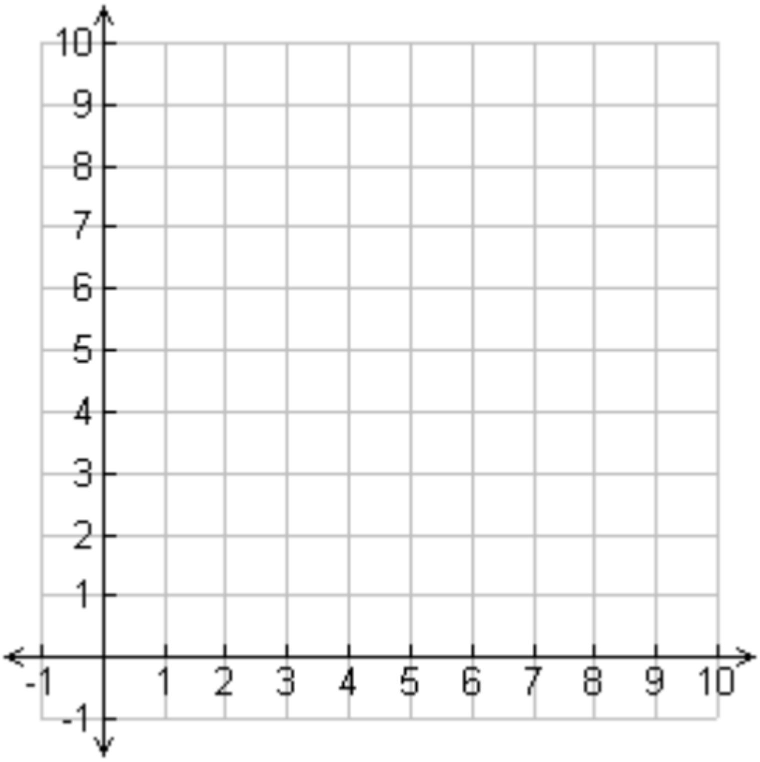
WE'LL COVER THE FOLLOWING ^

- Solution:

Solution:

The getter methods are written in the lines 11-15 in the following code playground. The `width()` and `height()` methods simply subtract the x and y coordinates respectively and return the result.

This solution is illustrated in the following figure:



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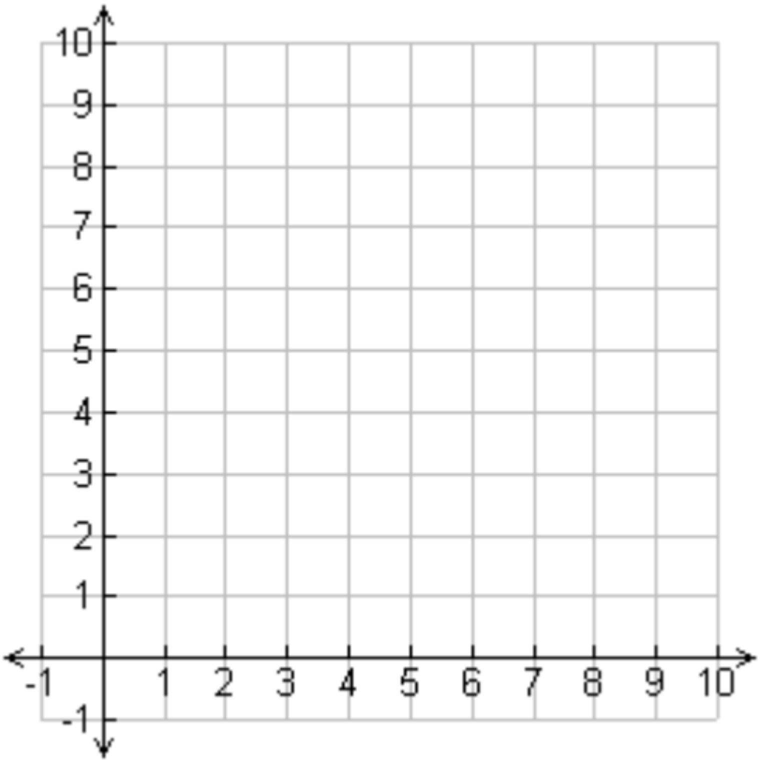
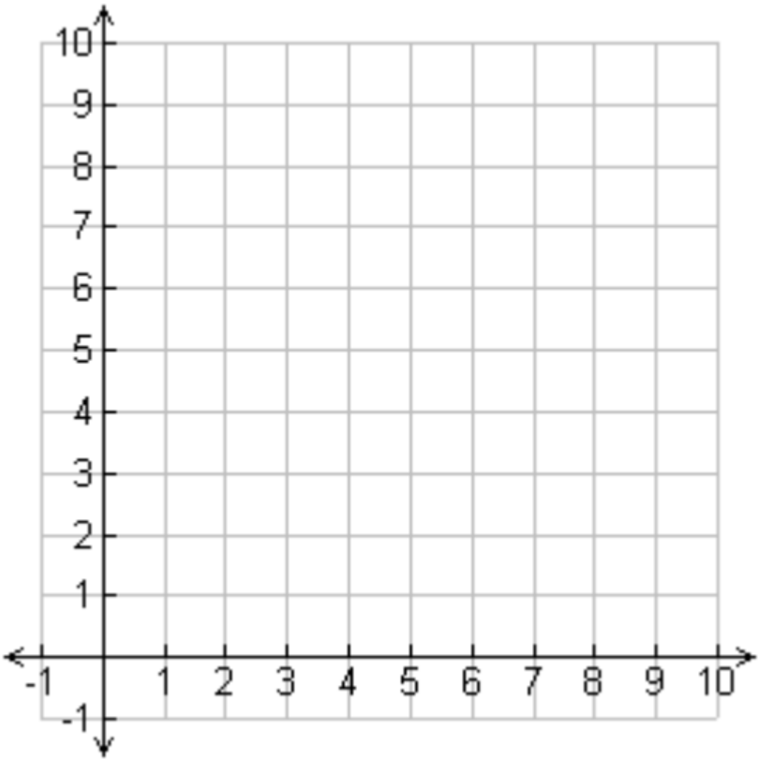
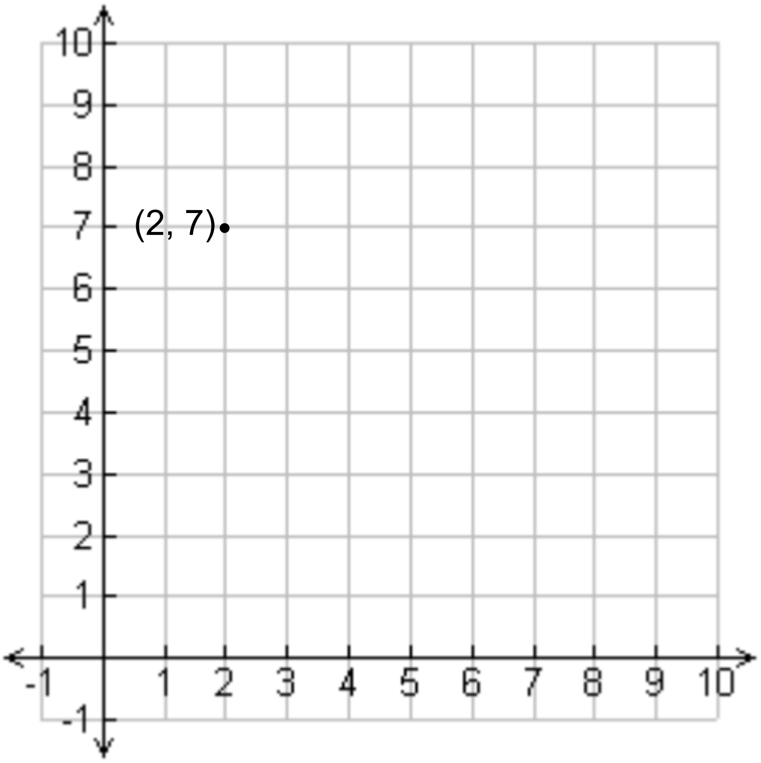


```
Rectangle (x1, y1, x2, y2)
```



```
r = Rectangle (2, 7, 8, 4)
```



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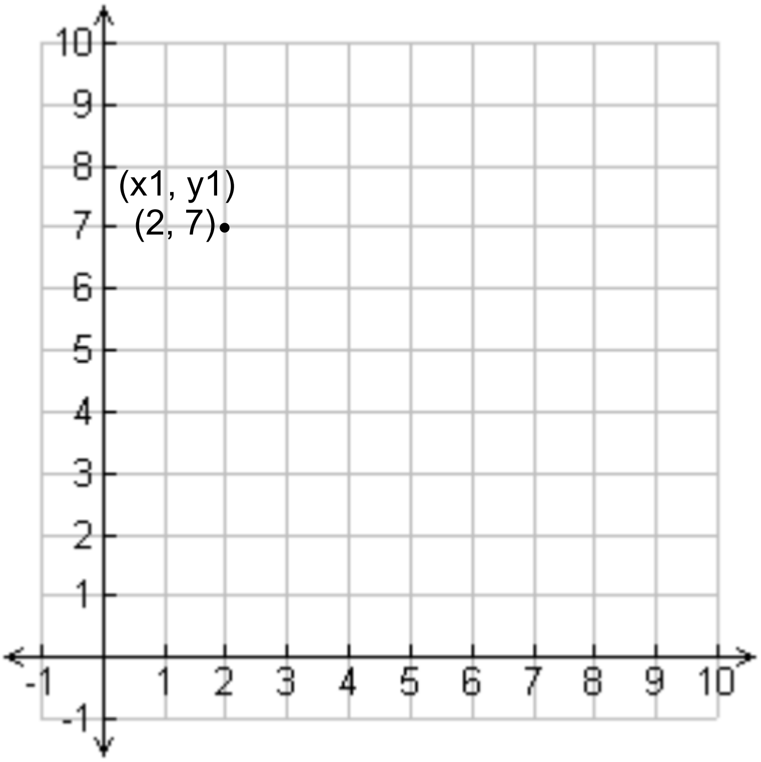

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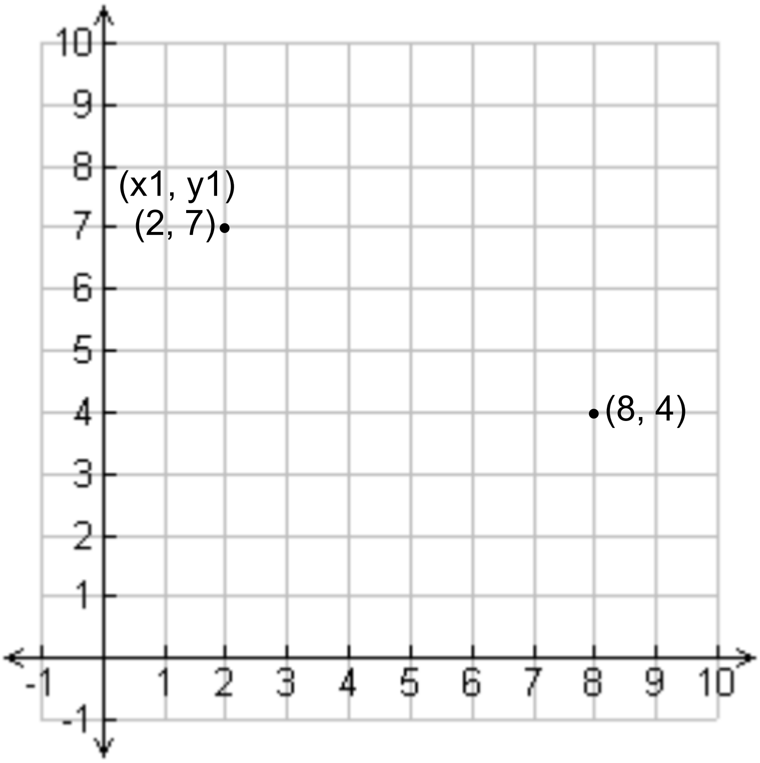

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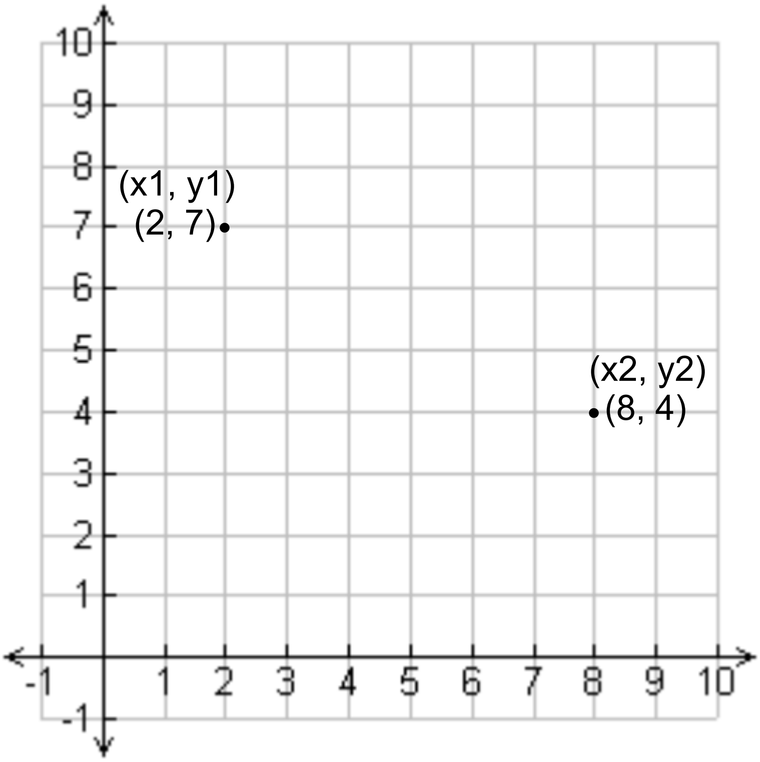

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r = Rectangle (2, 7, 8, 4)
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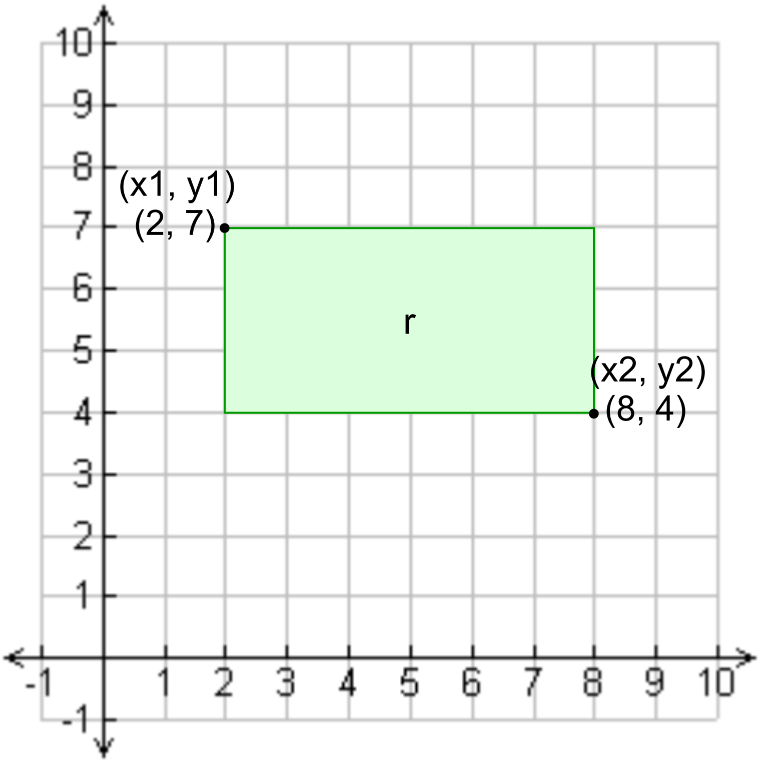

```
r = Rectangle (2, 7, 8, 4)
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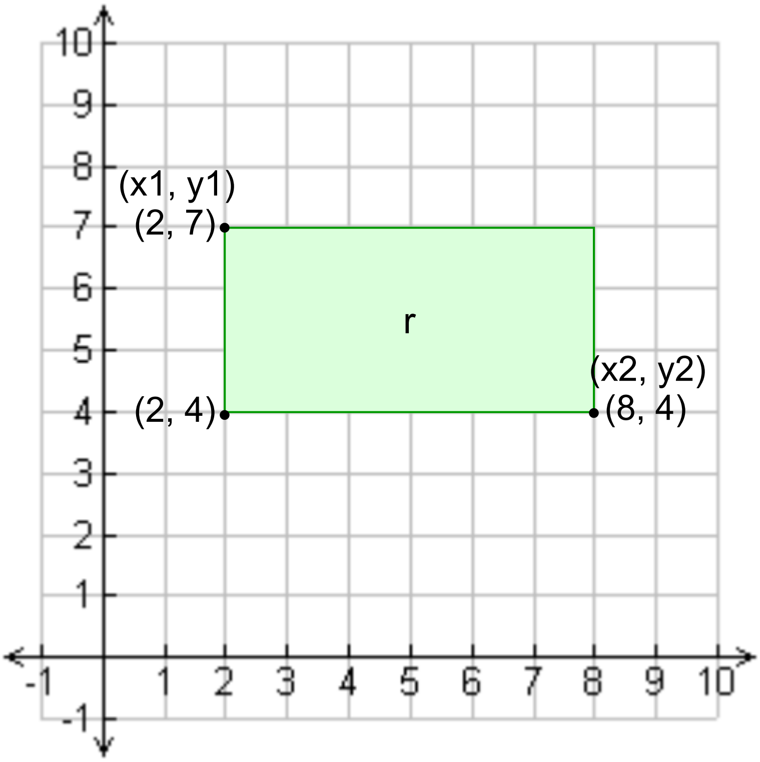

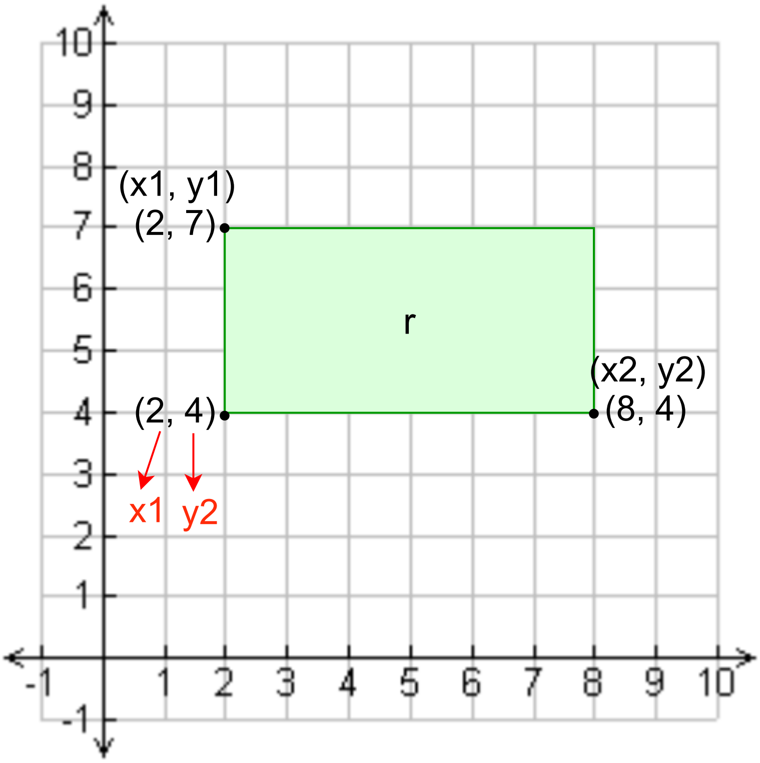
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(x1, y1)
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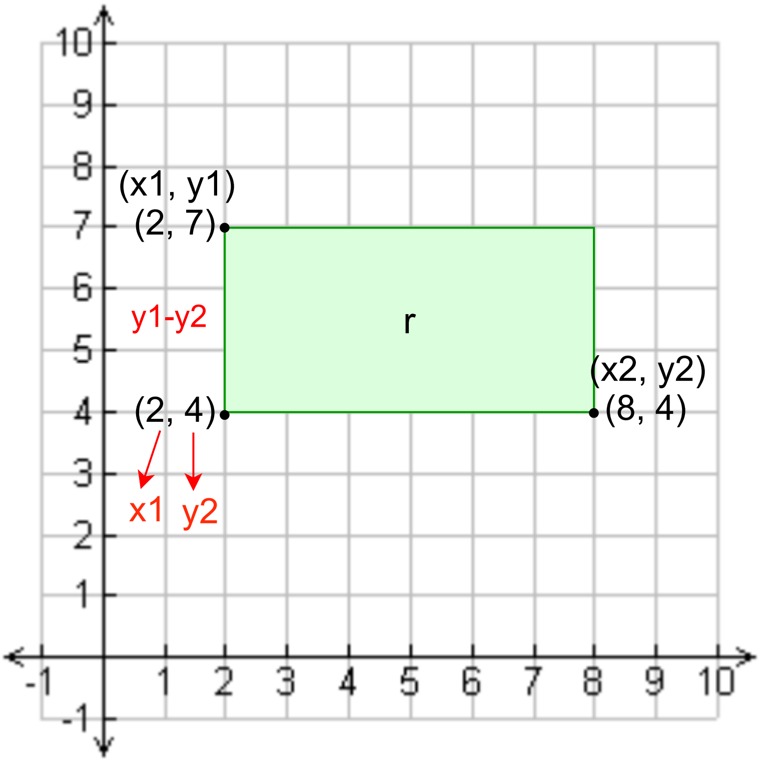
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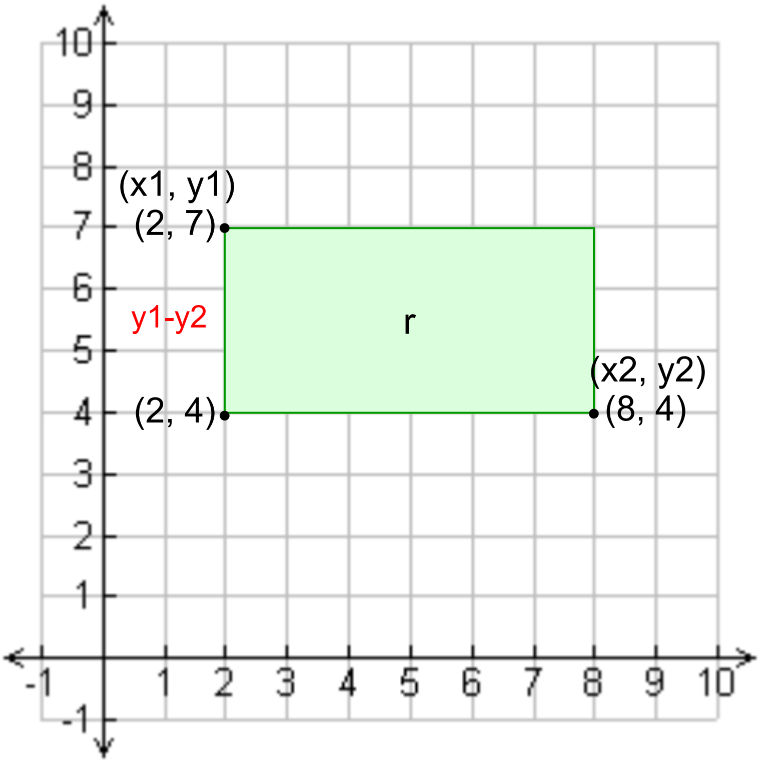
(2, 4)
x1
y2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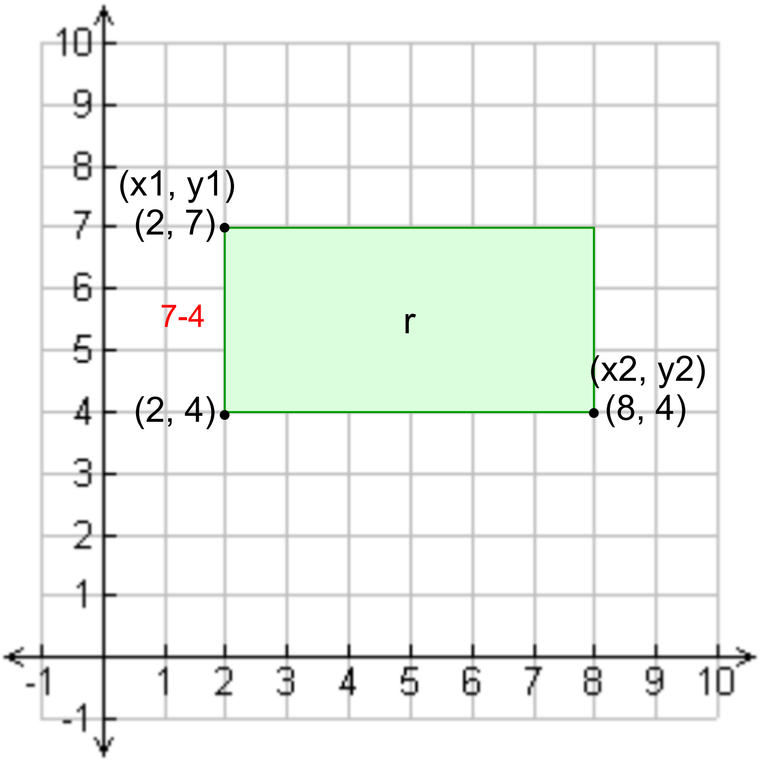
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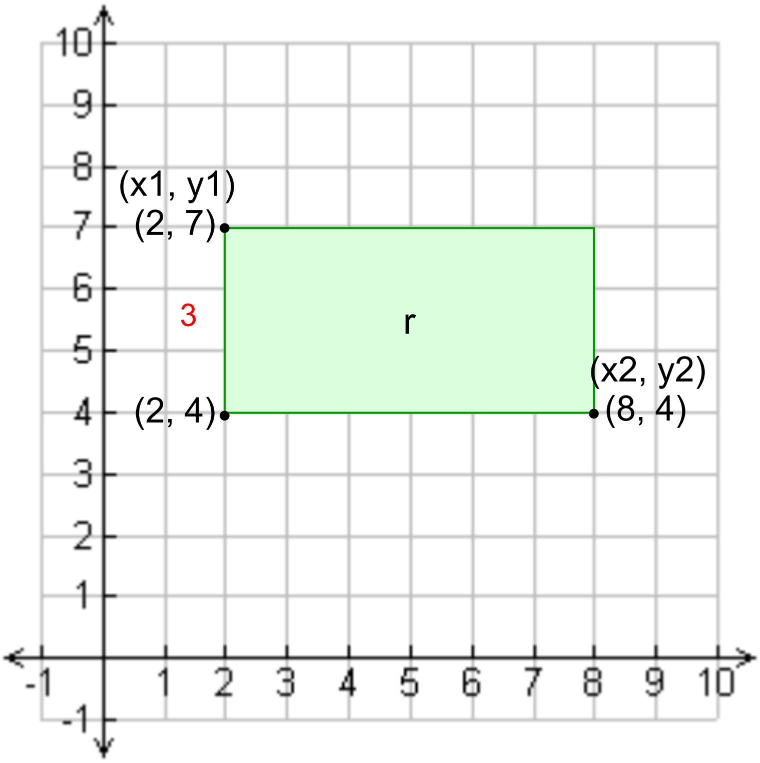
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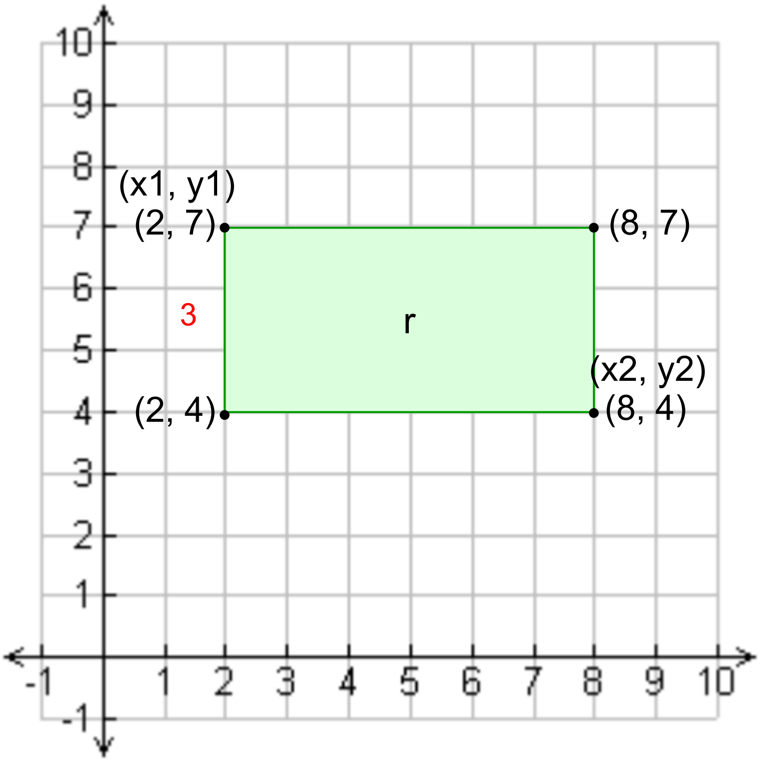
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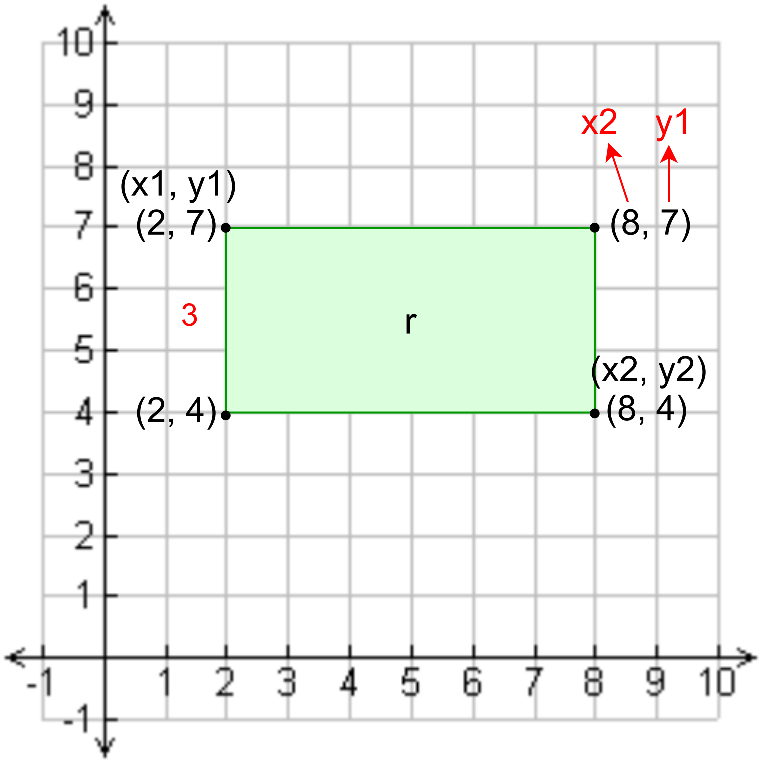
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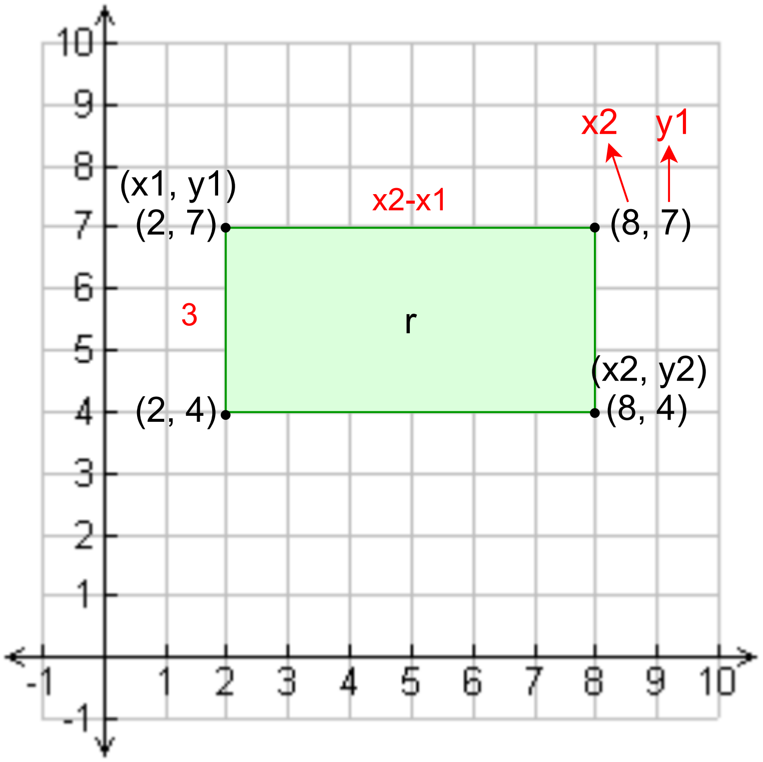
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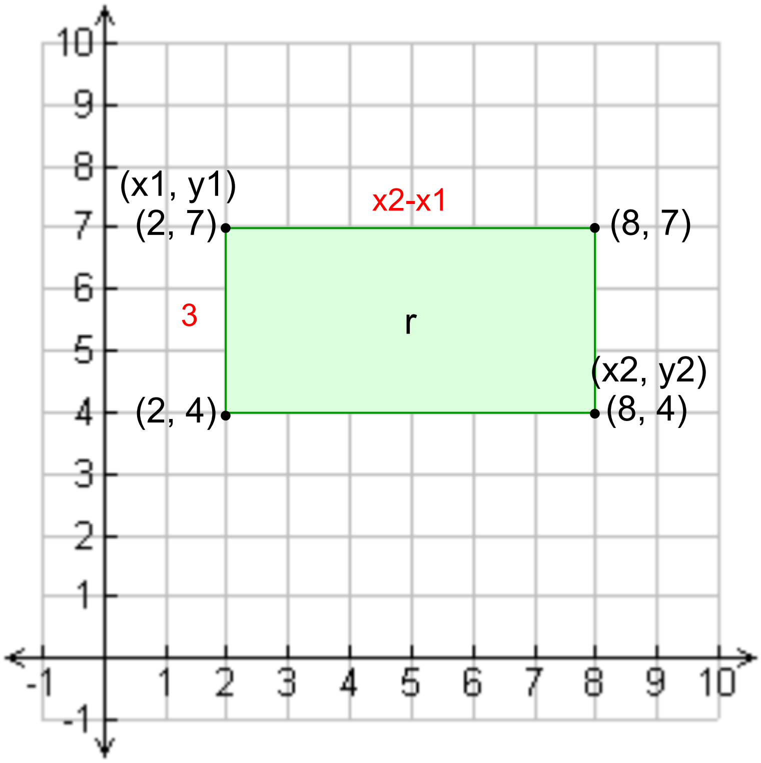
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x2-x1
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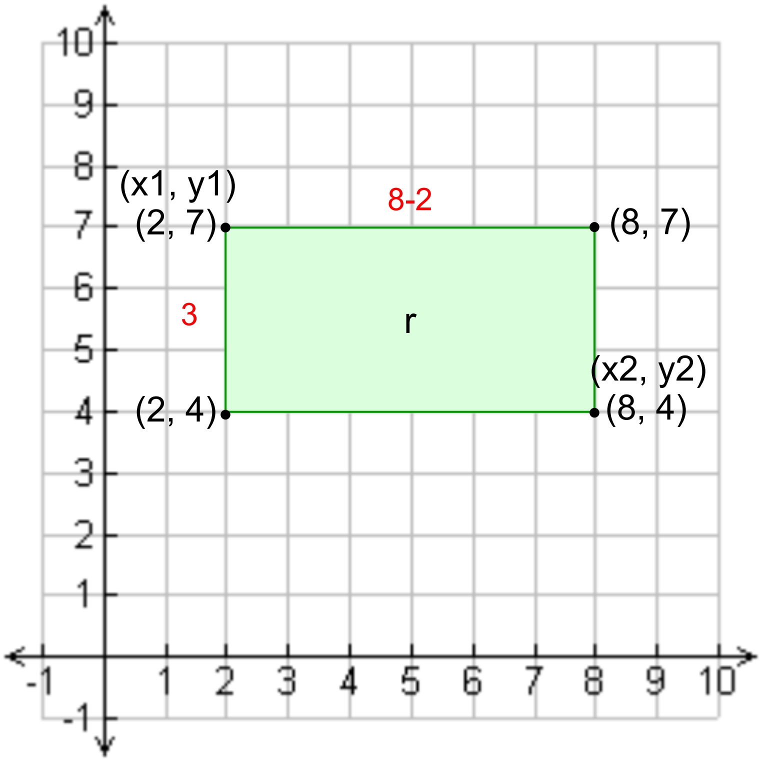
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(x2, y2)
(8, 4)
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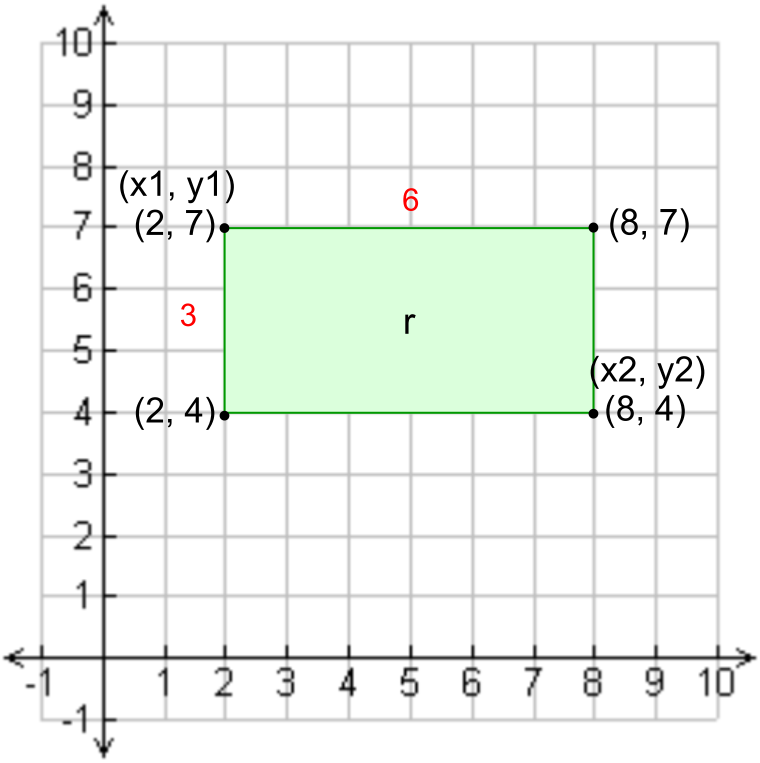

(x1, y1)
(2, 7)
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(x2, y2)
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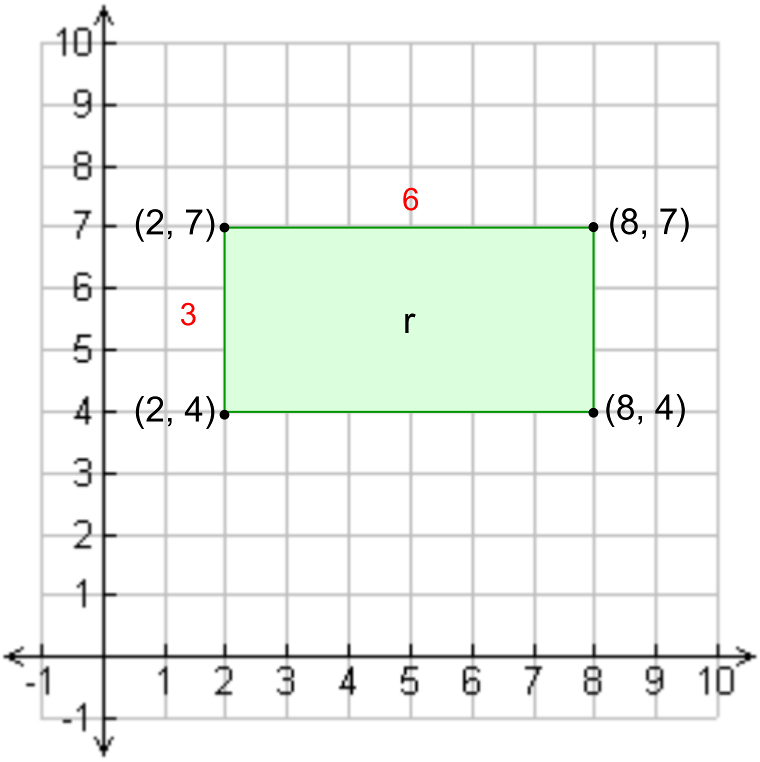

(2, 7)
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(8, 7)
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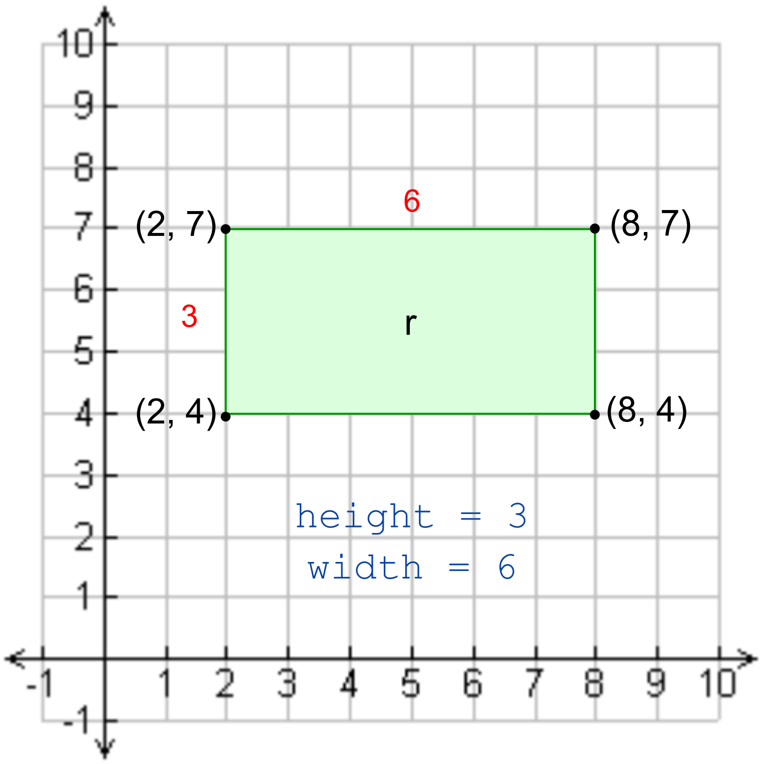
(2, 4)
(8, 4)



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The following code illustrates the concept:

```
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

rectangle = Rectangle(2, 7, 8, 4)
print(rectangle.width())
print(rectangle.height())
```

Now, let’s expand this challenge by implementing the area and perimeter methods in the next lesson.