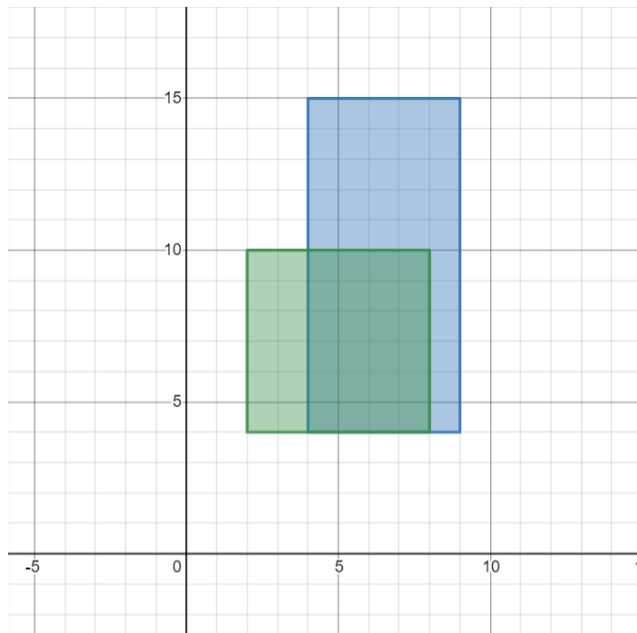


Rectangle Program - TEST CASES

1.



1		<code>polygon((4,4),(4,15),(9,15),(9,4))</code>	
2		<code>polygon((2,4),(2,10),(8,10),(8,4))</code>	
3			

Rectangle Class:

X coordinate of Rectangle A: 4

y coordinate of Rectangle A: 4

Width A: 5

Height A: 11

Area A: 55 px²

Perimeter A: 32 px

X coordinate of Rectangle B: 2

y coordinate of Rectangle B: 4

Width B: 6

Height B: 6

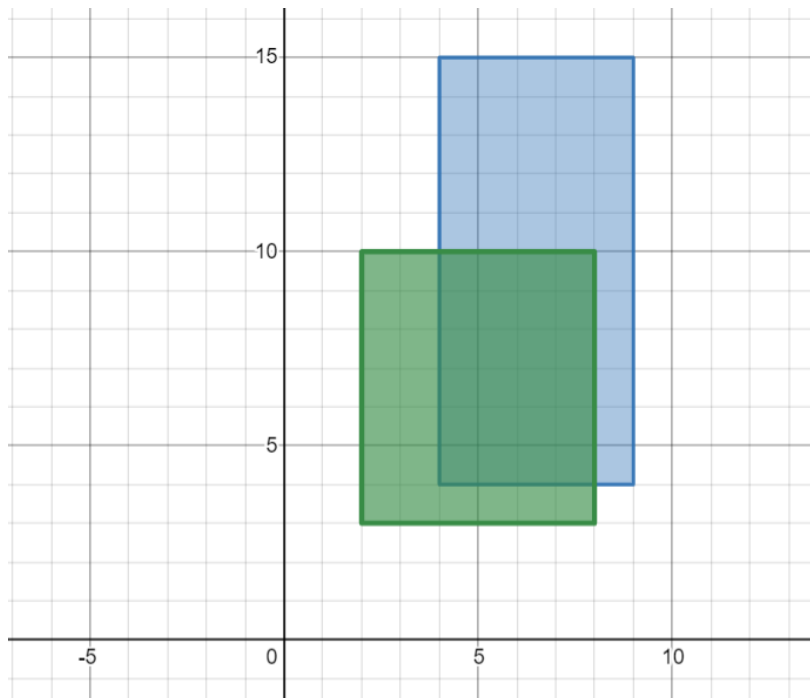
Area B: 36 px²

Perimeter B: 24 px

Intersection Rectangle of Rect. A & Rect. B: base: (4,4) w: 4 h: 6

Total Perimeter for Both: 36 px

2.



```
1 polygon((4,4),(4,15),(9,15),(9,4))
2 polygon((2,3),(2,10),(8,10),(8,3))
3
```

Rectangle Class:

X coordinate of Rectangle A: 4

y coordinate of Rectangle A: 4

Width A: 5

Height A: 11

Area A: 55 px²

Perimeter A: 32 px

X coordinate of Rectangle B: 2

y coordinate of Rectangle B: 3

Width B: 6

Height B: 7

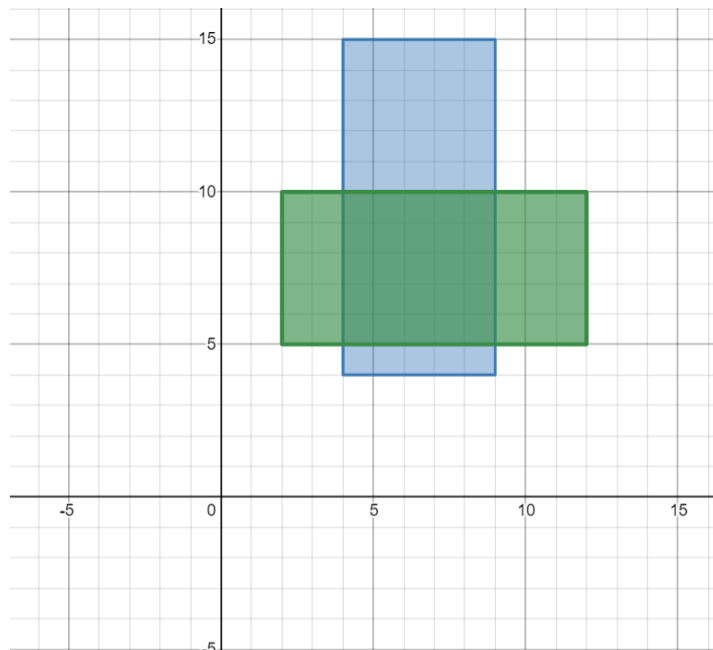
Area B: 42 px²





Perimeter B: 26 px

Intersection Rectangle of Rect. A & Rect. B: base: (4,4) w: 4 h: 6

Total Perimeter for Both: 38 px

3.



1	 <code>polygon((4,4),(4,15),(9,15),(9,4))</code>	
2	 <code>polygon((2,5),(2,10),(12,10),(12,5))</code>	
3		

Rectangle Class:

X coordinate of Rectangle A: 4

y coordinate of Rectangle A: 4

Width A: 5

Height A: 11

Area A: 55 px²

Perimeter A: 32 px

X coordinate of Rectangle B: 2

y coordinate of Rectangle B: 5

Width B: 10

Height B: 5

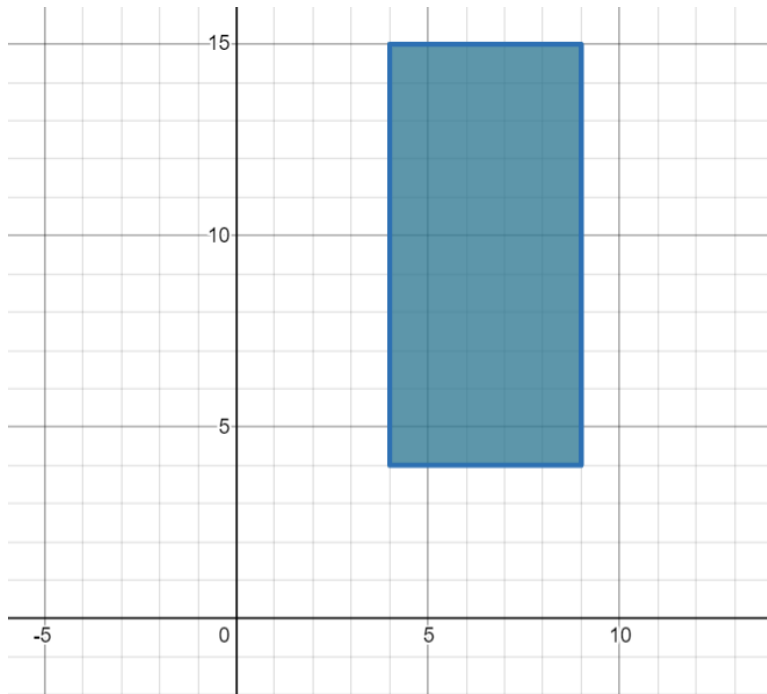
Area B: 50 px²

Perimeter B: 30 px

Intersection Rectangle of Rect. A & Rect. B: base: (4,5) w: 5 h: 5

Total Perimeter for Both: 42 px

4.



```
1 polygon((4,4),(4,15),(9,15),(9,4))
2 polygon((4,4),(4,15),(9,15),(9,4))
3
```

Rectangle Class:

X coordinate of Rectangle A: 4

y coordinate of Rectangle A: 4

Width A: 5

Height A: 11

Area A: 55 px²

Perimeter A: 32 px

X coordinate of Rectangle B: 4

y coordinate of Rectangle B: 4

Width B: 5

Height B: 11

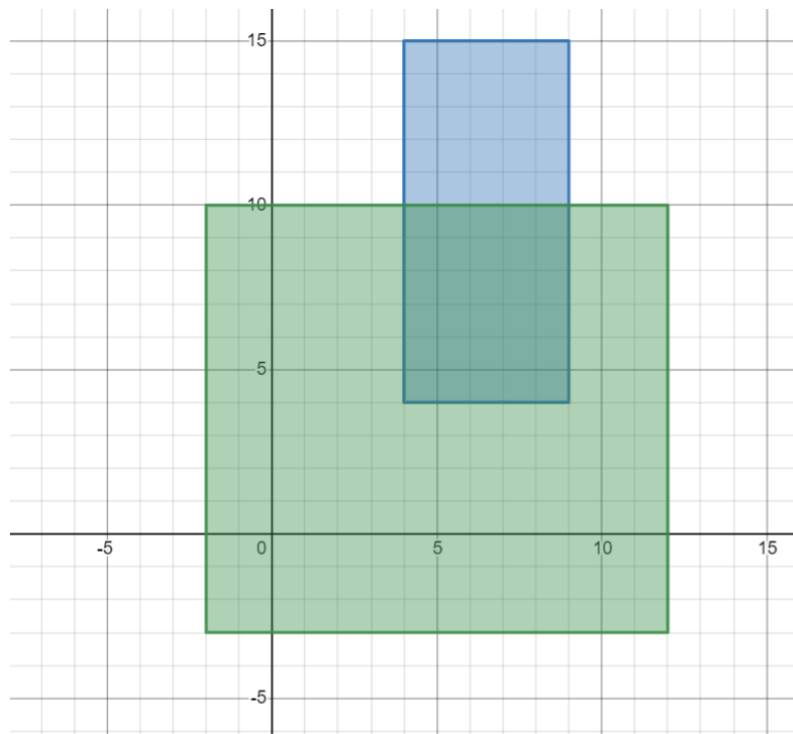
Area B: 55 px²

Perimeter B: 32 px


Intersection Rectangle of Rect. A & Rect. B: base: (4,4) w: 5 h: 11


Total Perimeter for Both: 32 px

5.





1

 `polygon((4,4),(4,15),(9,15),(9,4))`



2

 `polygon((-2,-3),(-2,10),(12,10),(12,-3))`



3

Rectangle Class:

X coordinate of Rectangle A: 4

y coordinate of Rectangle A: 4

Width A: 5

Height A: 11

Area A: 55 px²

Perimeter A: 32 px

X coordinate of Rectangle B: -2

y coordinate of Rectangle B: -3

Width B: 14

Height B: 13

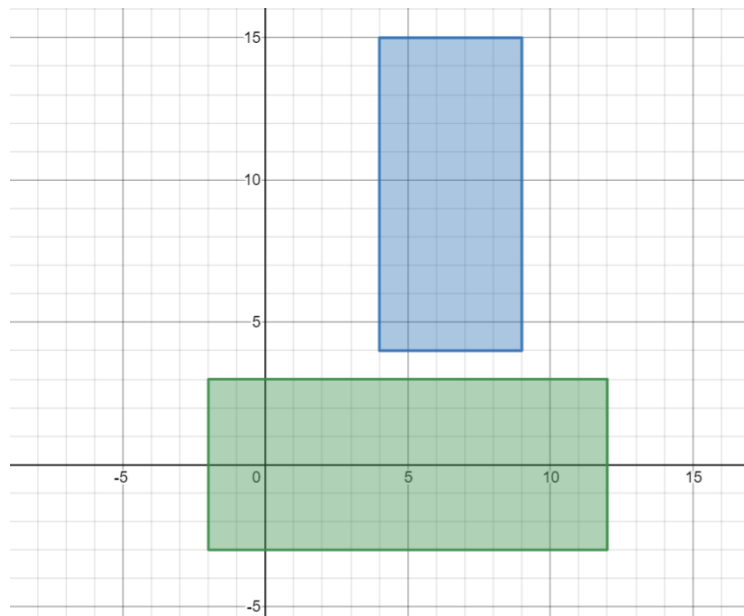
Area B: 182 px²





Perimeter B: 54 px

Intersection Rectangle of Rect. A & Rect. B: base: (4,4) w: 5 h: 6

Total Perimeter for Both: 64 px

6.



1	 <code>polygon((4,4),(4,15),(9,15),(9,4))</code> 
2	 <code>polygon((-2,-3),(-2,3),(12,3),(12,-3))</code> 

Rectangle Class:

X coordinate of Rectangle A: 4

y coordinate of Rectangle A: 4

Width A: 5

Height A: 11

Area A: 55 px²

Perimeter A: 32 px

X coordinate of Rectangle B: -2

y coordinate of Rectangle B: -3

Width B: 14

Height B: 6

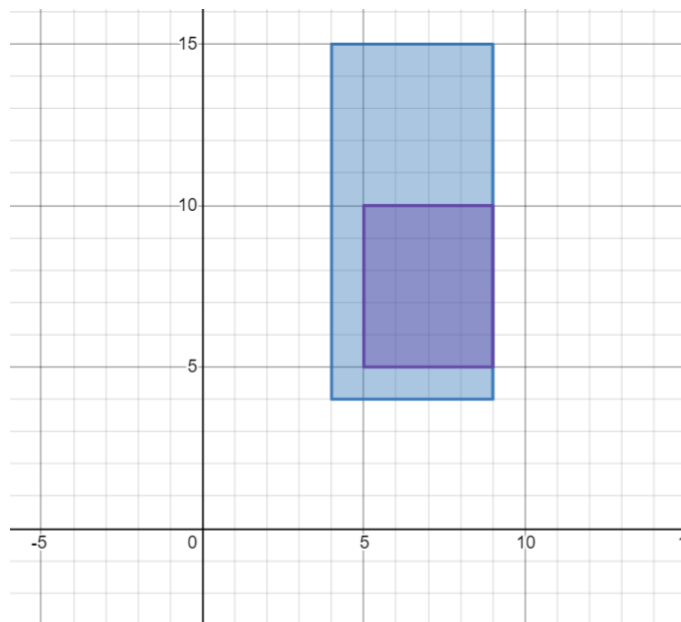
Area B: 84 px²





Perimeter B: 40 px

The rectangle does not intersect.

Total Perimeter for Both: 72 px

7.



1	 <code>polygon((4,4),(4,15),(9,15),(9,4))</code> 
2	 <code>polygon((5,5),(5,10),(9,10),(9,5))</code> 

Rectangle Class:

X coordinate of Rectangle A: 4

y coordinate of Rectangle A: 4

Width A: 5

Height A: 11

Area A: 55 px²

Perimeter A: 32 px

X coordinate of Rectangle B: 5

y coordinate of Rectangle B: 5

Width B: 4

Height B: 5

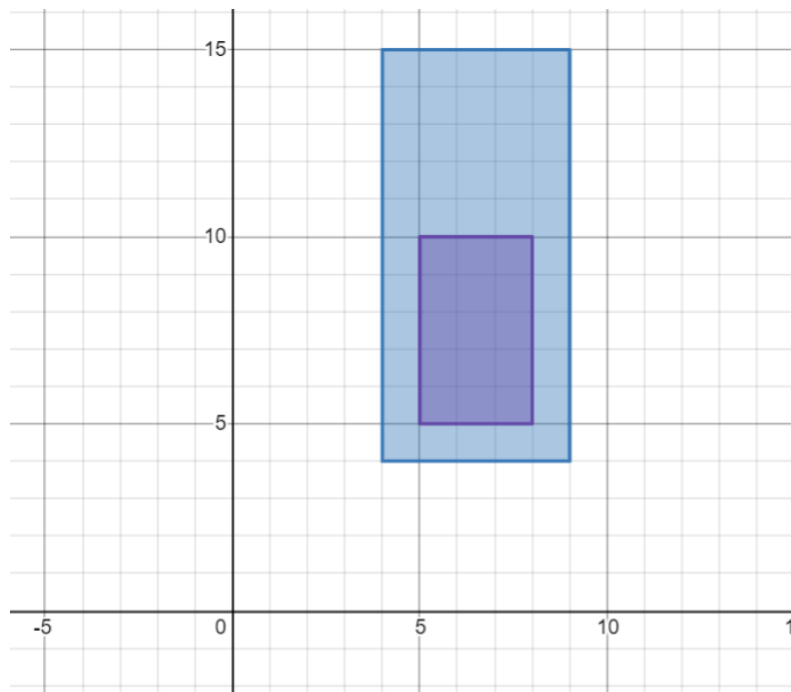
Area B: 20 px²





Perimeter B: 18 px

Intersection Rectangle of Rect. A & Rect. B: base: (5,5) w: 4 h: 5

Total Perimeter for Both: 32 px

8.



1	 <code>polygon((4,4),(4,15),(9,15),(9,4))</code>	
2	 <code>polygon((5,5),(5,10),(8,10),(8,5))</code>	

Rectangle Class:

X coordinate of Rectangle A: 4

y coordinate of Rectangle A: 4

Width A: 5

Height A: 11

Area A: 55 px²

Perimeter A: 32 px

X coordinate of Rectangle B: 5

y coordinate of Rectangle B: 5

Width B: 3

Height B: 5

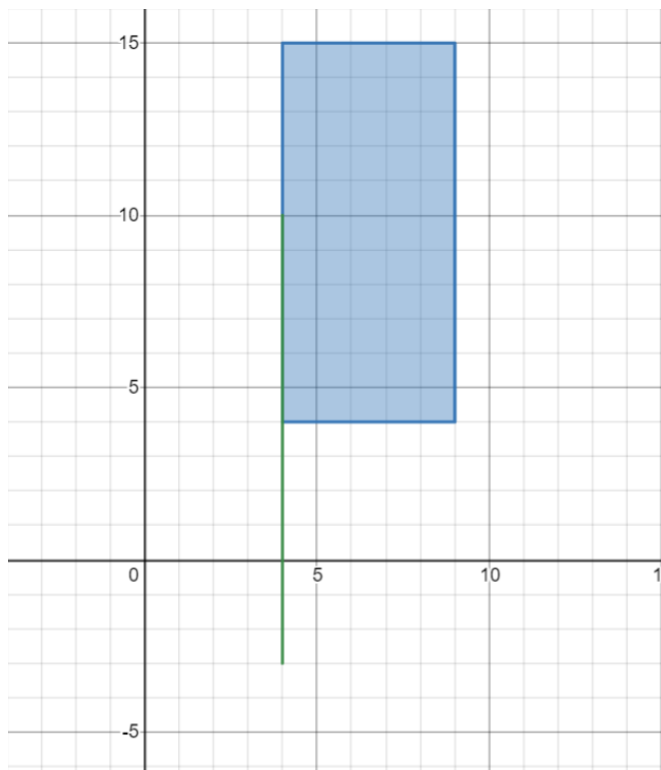
Area B: 15 px²




Perimeter B: 16 px

Intersection Rectangle of Rect. A & Rect. B: base: (5,5) w: 3 h: 5

Total Perimeter for Both: 32 px

9.



1	 <code>polygon((4,4),(4,15),(9,15),(9,4))</code>	
2	 <code>polygon((4,-3),(4,10),(4,10),(4,-3))</code>	

Rectangle Class:

X coordinate of Rectangle A: 4

y coordinate of Rectangle A: 4

Width A: 5

Height A: 11

Area A: 55 px²

Perimeter A: 32 px

X coordinate of Rectangle B: 4

y coordinate of Rectangle B: -3

Width B: 0

Height B: 13

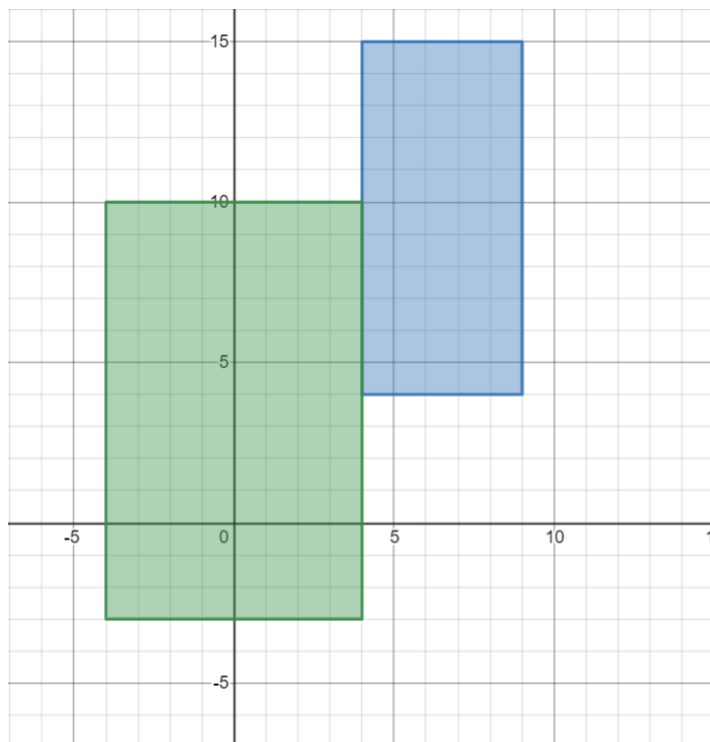
Area B: 0 px²





Perimeter B: 13 px

Intersection Rectangle of Rect. A & Rect. B: base: (4,4) w: 0 h: 6

Total Perimeter for Both: 39 px

10.



1	 <code>polygon((4,4),(4,15),(9,15),(9,4))</code>	
2	 <code>polygon((4,-3),(4,10),(-4,10),(-4,-3))</code>	

Rectangle Class:

X coordinate of Rectangle A: 4

y coordinate of Rectangle A: 4

Width A: 5

Height A: 11

Area A: 55 px^2

Perimeter A: 32 px

X coordinate of Rectangle B: -4

y coordinate of Rectangle B: -3

Width B: 8

Height B: 13

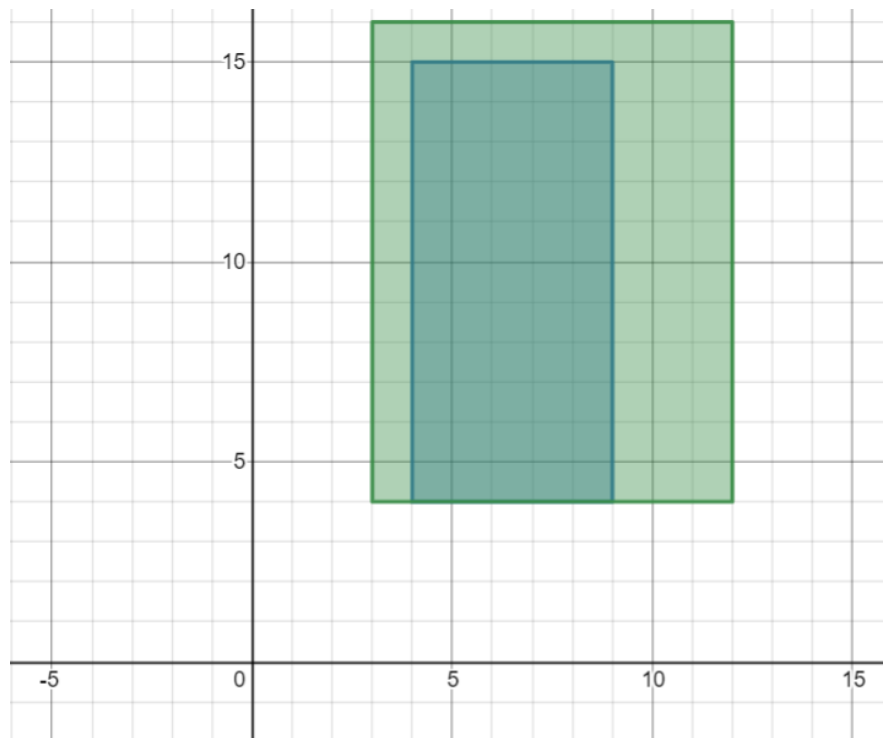
Area B: 104 px^2

Perimeter B: 42 px

Intersection Rectangle of Rect. A & Rect. B: base: (4,4) w: 0 h: 6

Total Perimeter for Both: 62 px

11.



```
1 polygon((4,4),(4,15),(9,15),(9,4))
2 polygon((3,4),(3,16),(12,16),(12,4))
```

Rectangle Class:

X coordinate of Rectangle A: 4

y coordinate of Rectangle A: 4

Width A: 5

Height A: 11

Area A: 55 px²

Perimeter A: 32 px

X coordinate of Rectangle B: 3

y coordinate of Rectangle B: 4

Width B: 9

Height B: 12

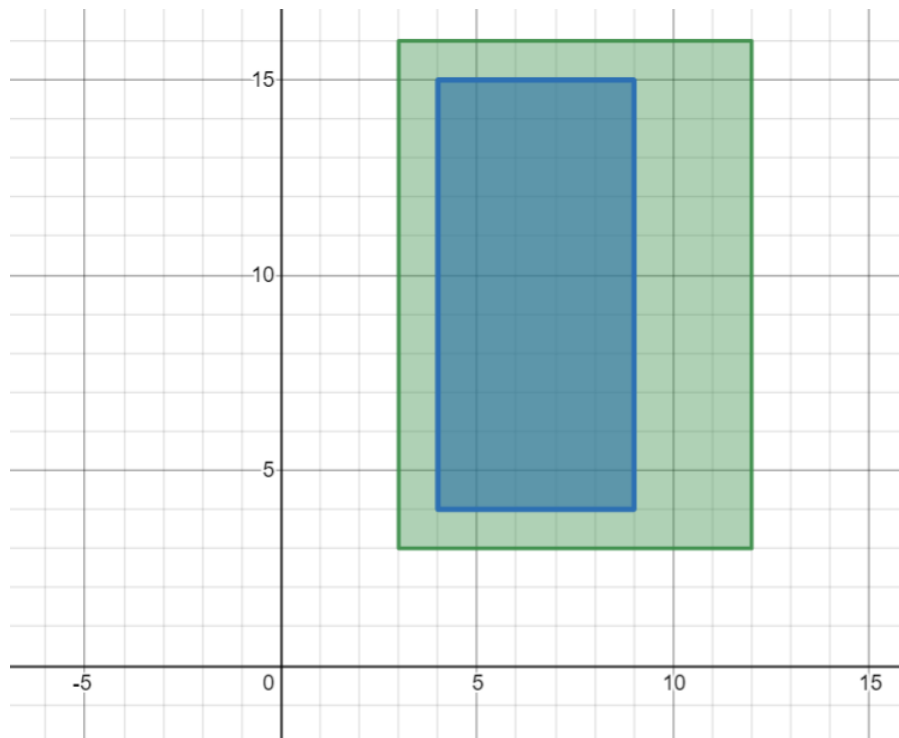
Area B: 108 px²





Perimeter B: 42 px

Intersection Rectangle of Rect. A & Rect. B: base: (4,4) w: 5 h: 11

Total Perimeter for Both: 42 px

12.



1		<code>polygon((4,4),(4,15),(9,15),(9,4))</code>	
2		<code>polygon((3,3),(3,16),(12,16),(12,3))</code>	

Rectangle Class:

X coordinate of Rectangle A: 4

y coordinate of Rectangle A: 4

Width A: 5

Height A: 11

Area A: 55 px²

Perimeter A: 32 px

X coordinate of Rectangle B: 3

y coordinate of Rectangle B: 3

Width B: 9

Height B: 13

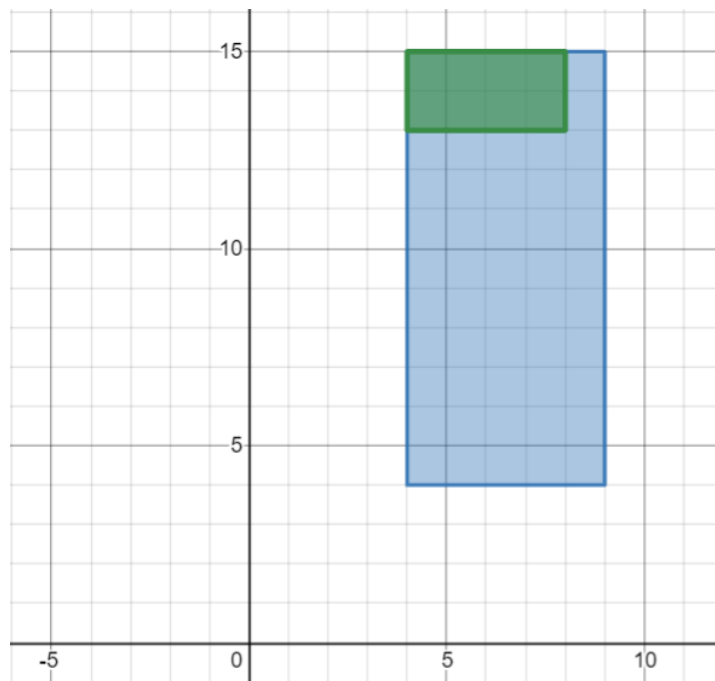
Area B: 117 px²





Perimeter B: 44 px

Intersection Rectangle of Rect. A & Rect. B: base: (4,4) w: 5 h: 11

Total Perimeter for Both: 44 px

13.



1	 <code>polygon((4,4),(4,15),(9,15),(9,4))</code> 
2	 <code>polygon((4,13),(4,15),(8,15),(8,13))</code> 

Rectangle Class:

X coordinate of Rectangle A: 4

y coordinate of Rectangle A: 4

Width A: 5

Height A: 11

Area A: 55 px²

Perimeter A: 32 px

X coordinate of Rectangle B: 4

y coordinate of Rectangle B: 13

Width B: 4

Height B: 2

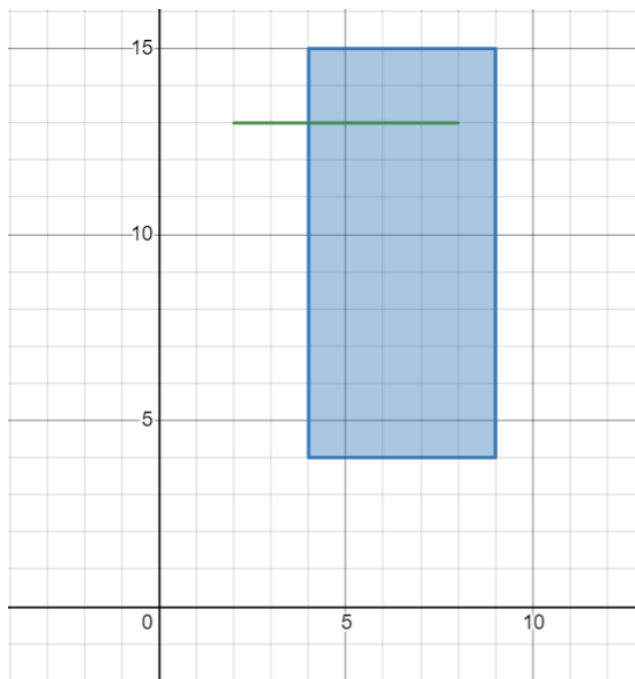
Area B: 8 px²





Perimeter B: 12 px

Intersection Rectangle of Rect. A & Rect. B: base: (4,13) w: 4 h: 2

Total Perimeter for Both: 32 px

14.



1	 <code>polygon((4,4),(4,15),(9,15),(9,4))</code>	
2	 <code>polygon((2,13),(2,13),(8,13),(8,13))</code>	

Rectangle Class:

X coordinate of Rectangle A: 4

y coordinate of Rectangle A: 4

Width A: 5

Height A: 11

Area A: 55 px²

Perimeter A: 32 px

X coordinate of Rectangle B: 2

y coordinate of Rectangle B: 13

Width B: 6

Height B: 0

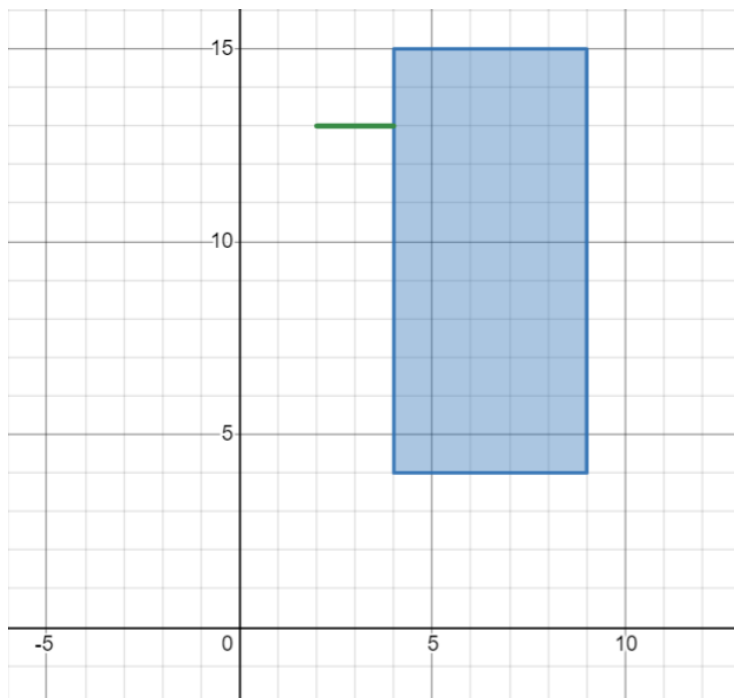
Area B: 0 px²





Perimeter B: 6 px

Intersection Rectangle of Rect. A & Rect. B: base: (4,13) w: 4 h: 0

Total Perimeter for Both: 34 px

15.



1	 <code>polygon((4,4),(4,15),(9,15),(9,4))</code>	
2	 <code>polygon((2,13),(2,13),(4,13),(4,13))</code>	

Rectangle Class:

X coordinate of Rectangle A: 4 **y coordinate of Rectangle A: 4**

Width A: 5 **Height A: 11**

Area A: 55 px² **Perimeter A: 32 px**

X coordinate of Rectangle B: 2 **y coordinate of Rectangle B: 13**

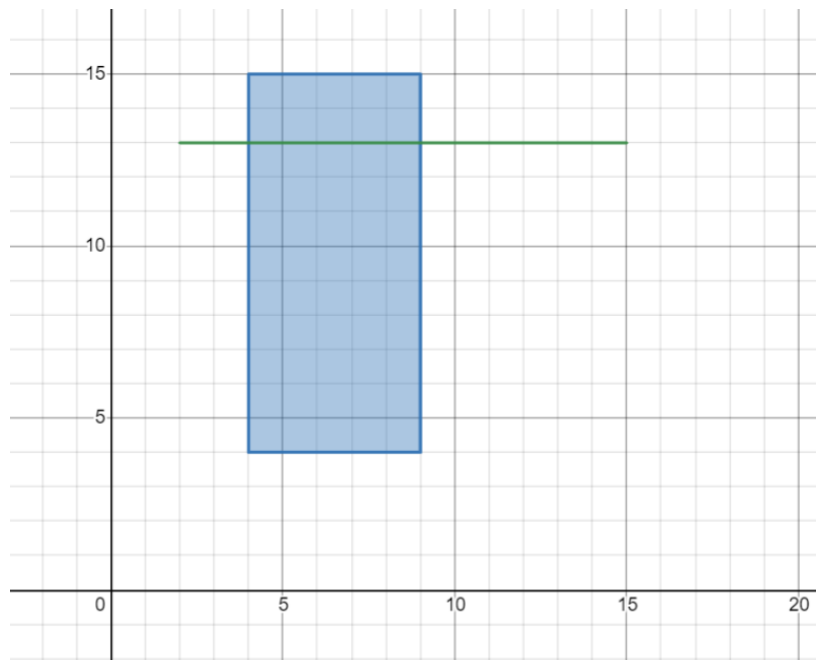
Width B: 2 **Height B: 0**

Area B: 0 px² **Perimeter B: 2 px**

Intersection Rectangle of Rect. A & Rect. B: base: (4,13) w: 0 h: 0

Total Perimeter for Both: 34 px

16.




1

 `polygon((4,4),(4,15),(9,15),(9,4))`



2

 `polygon((2,13),(2,13),(15,13),(15,13))`



Rectangle Class:

X coordinate of Rectangle A: 4 y coordinate of Rectangle A: 4

Width A: 5 Height A: 11

Area A: 55 px² Perimeter A: 32 px

X coordinate of Rectangle B: 2 y coordinate of Rectangle B: 13

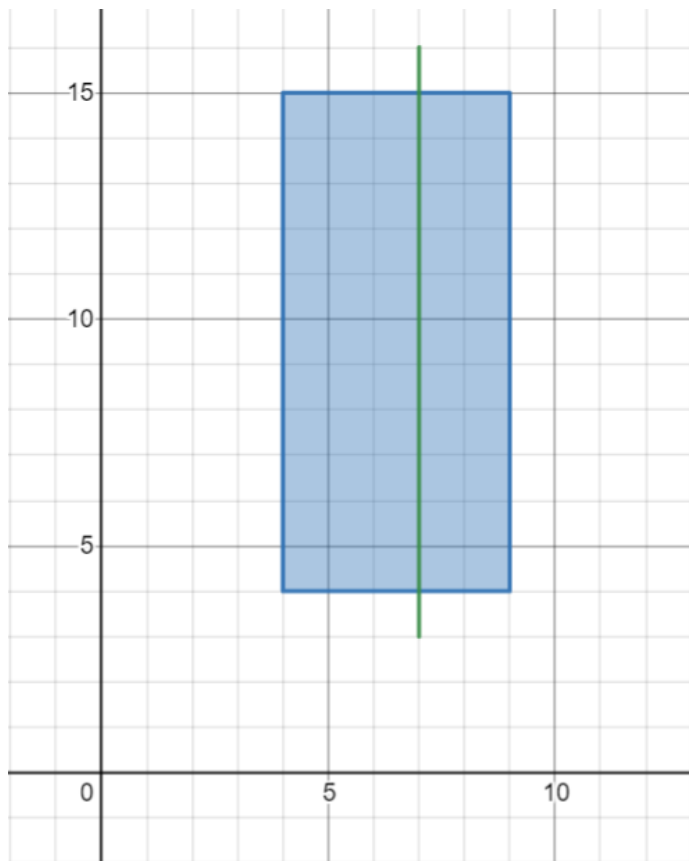
Width B: 13 Height B: 0

Area B: 0 px² Perimeter B: 13 px

Intersection Rectangle of Rect. A & Rect. B: base: (4,13) w: 5 h: 0

Total Perimeter for Both: 40 px

17.



```
1 polygon((4,4),(4,15),(9,15),(9,4))
2 polygon((7,3),(7,3),(7,16),(7,16))
3
```

Rectangle Class:

X coordinate of Rectangle A: 4 y coordinate of Rectangle A: 4

Width A: 5 Height A: 11

Area A: 55 px² Perimeter A: 32 px

X coordinate of Rectangle B: 7 y coordinate of Rectangle B: 3

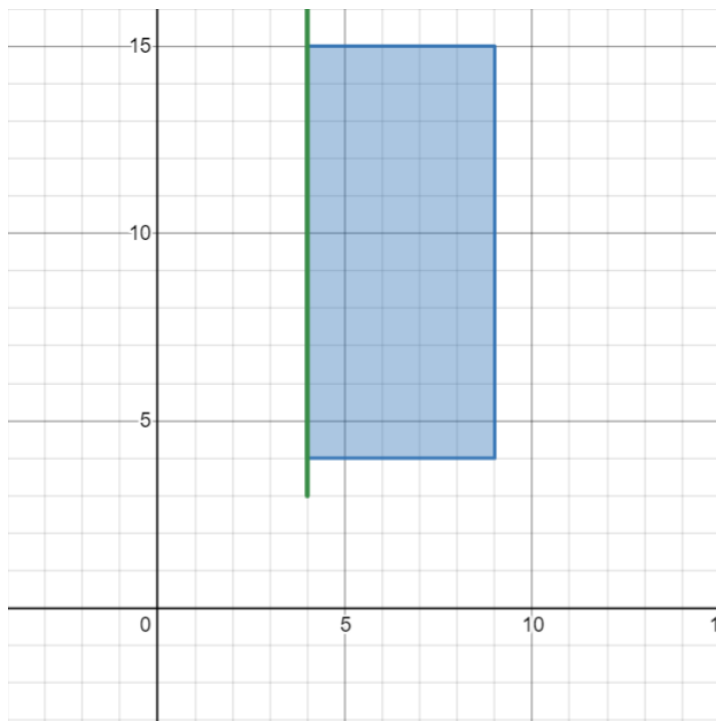
Width B: 0 Height B: 13

Area B: 0 px² Perimeter B: 13 px

Intersection Rectangle of Rect. A & Rect. B: base: (7,4) w: 0 h: 11

Total Perimeter for Both: 34 px

18.



```
1 polygon((4,4),(4,15),(9,15),(9,4))
2 polygon((4,3),(4,3),(4,16),(4,16))
```

Rectangle Class:

X coordinate of Rectangle A: 4 y coordinate of Rectangle A: 4

Width A: 5 Height A: 11

Area A: 55 px² Perimeter A: 32 px

X coordinate of Rectangle B: 4 y coordinate of Rectangle B: 3

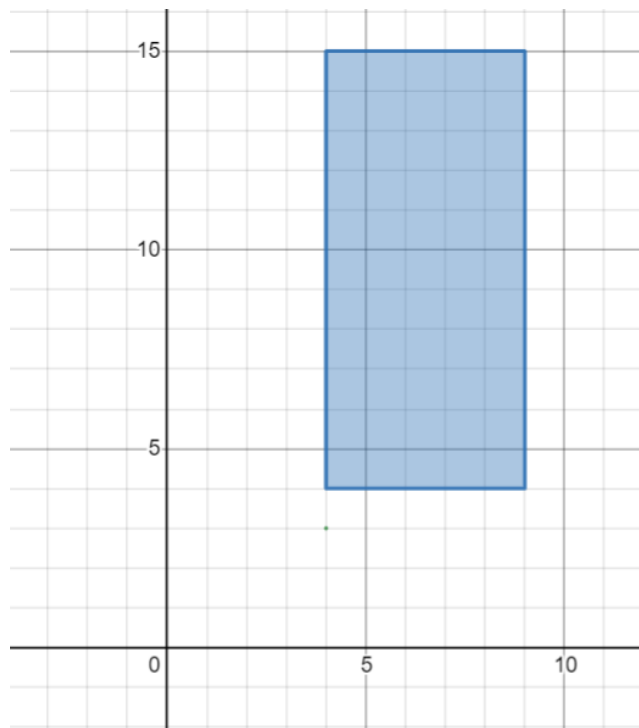
Width B: 0 Height B: 13





Area B: 0 px² Perimeter B: 13 px

Intersection Rectangle of Rect. A & Rect. B: base: (4,4) w: 0 h: 11

Total Perimeter for Both: 34 px

19.



1	 <code>polygon((4,4),(4,15),(9,15),(9,4))</code>	
2	 <code>polygon((4,3),(4,3),(4,3),(4,3))</code>	

Rectangle Class:

X coordinate of Rectangle A: 4 y coordinate of Rectangle A: 4

Width A: 5 Height A: 11

Area A: 55 px² Perimeter A: 32 px

X coordinate of Rectangle B: 4 y coordinate of Rectangle B: 3

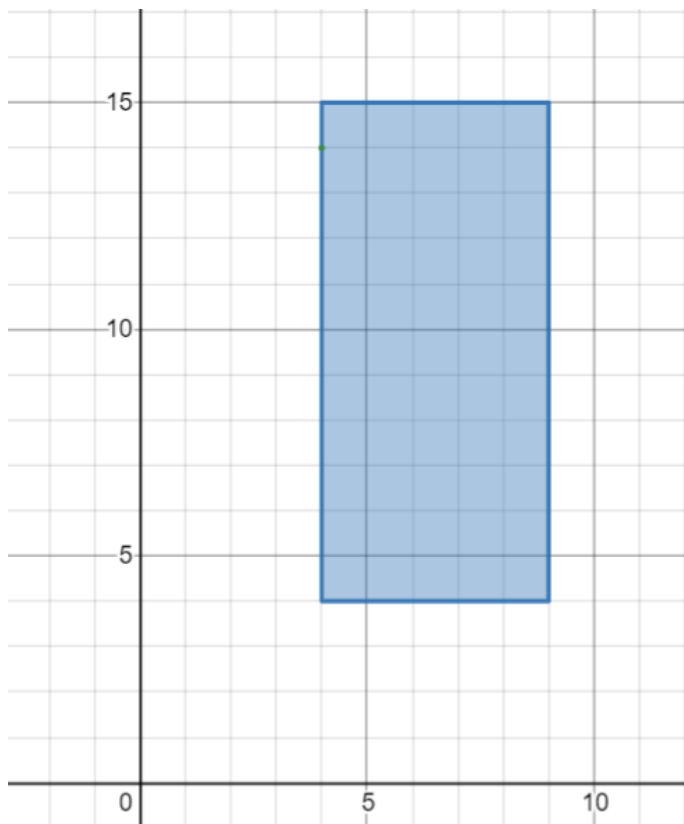
Width B: 0 Height B: 0

Area B: 0 px² Perimeter B: 0 px

The rectangle does not intersect.

Total Perimeter for Both: 32 px

20.



```
1 polygon((4,4),(4,15),(9,15),(9,4))
2 polygon((4,14),(4,14),(4,14),(4,14))
```

Rectangle Class:

X coordinate of Rectangle A: 4 y coordinate of Rectangle A: 4

Width A: 5 Height A: 11

Area A: 55 px² Perimeter A: 32 px

X coordinate of Rectangle B: 4 y coordinate of Rectangle B: 14

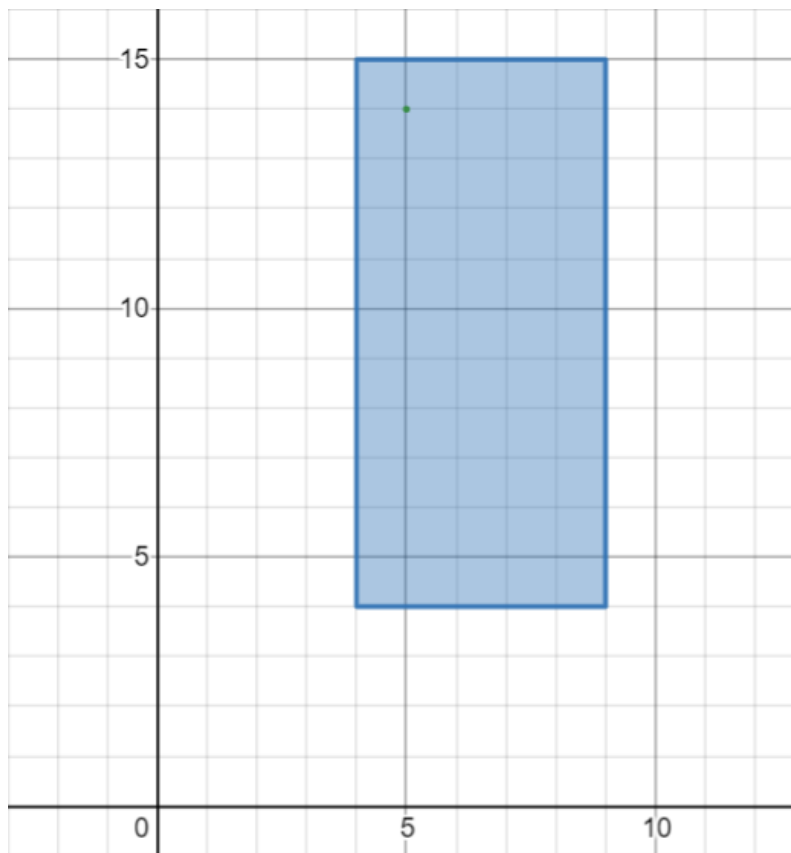
Width B: 0 Height B: 0

Area B: 0 px² Perimeter B: 0 px


Intersection Rectangle of Rect. A & Rect. B: base: (4,14) w: 0 h: 0


Total Perimeter for Both: 32 px

21.





1

 `polygon((4,4),(4,15),(9,15),(9,4))`



2

 `polygon((5,14),(5,14),(5,14),(5,14))`



Rectangle Class:

X coordinate of Rectangle A: 4 y coordinate of Rectangle A: 4

Width A: 5 Height A: 11

Area A: 55 px² Perimeter A: 32 px

X coordinate of Rectangle B: 5 y coordinate of Rectangle B: 14

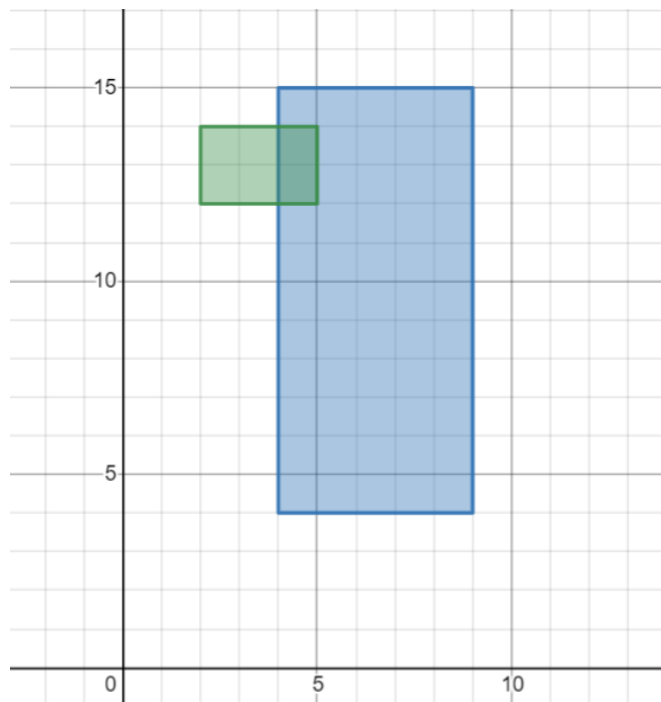
Width B: 0 Height B: 0





Area B: 0 px² Perimeter B: 0 px

Intersection Rectangle of Rect. A & Rect. B: base: (5,14) w: 0 h: 0

Total Perimeter for Both: 32 px

22.



1		<code>polygon((4,4),(4,15),(9,15),(9,4))</code>	
2		<code>polygon((2,12),(2,14),(5,14),(5,12))</code>	

Rectangle Class:

X coordinate of Rectangle A: 4 y coordinate of Rectangle A: 4

Width A: 5 Height A: 11

Area A: 55 px² Perimeter A: 32 px

X coordinate of Rectangle B: 2 y coordinate of Rectangle B: 12

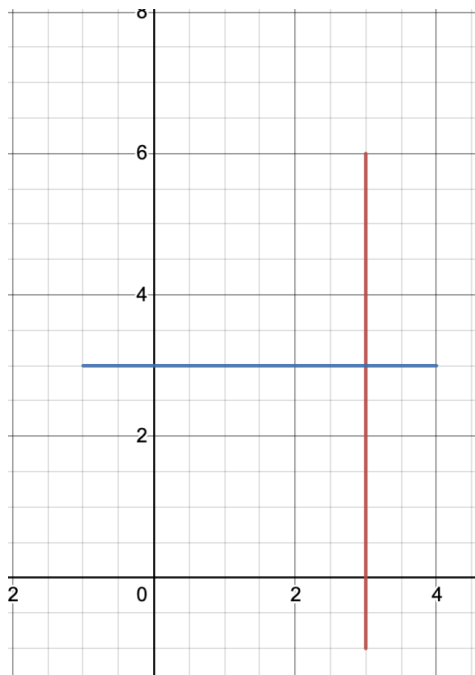
Width B: 3 Height B: 2

Area B: 6 px² Perimeter B: 10 px

Intersection Rectangle of Rect. A & Rect. B: base: (4,12) w: 1 h: 2

Total Perimeter for Both: 36 px

23.



1	 <code>polygon((3,6), (3,-1))</code>	
2	 <code>polygon((-1,3), (4,3))</code>	

Rectangle Class:

X coordinate of Rectangle A: 3 y coordinate of Rectangle A: -1

Width A: 0 Height A: 7

Area A: 0 px² Perimeter A: 7 px

X coordinate of Rectangle B: -1 y coordinate of Rectangle B: 3

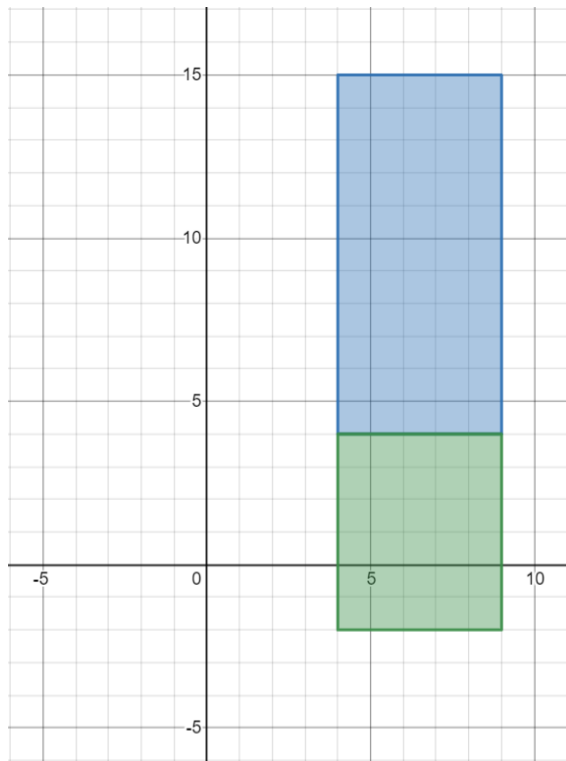
Width B: 5 Height B: 0

Area B: 0 px² Perimeter B: 5 px

Intersection Rectangle of Rect. A & Rect. B: base: (3,3) w: 0 h: 0

Total Perimeter for Both: 12 px

24.



```
1 polygon((4,4),(4,15),(9,15),(9,4))
2 polygon((4,4),(4,-2),(9,-2),(9,4))
```

Rectangle Class:

X coordinate of Rectangle A: 4 y coordinate of Rectangle A: 4

Width A: 5 Height A: 11

Area A: 55 px² Perimeter A: 32 px

X coordinate of Rectangle B: 4 y coordinate of Rectangle B: -2

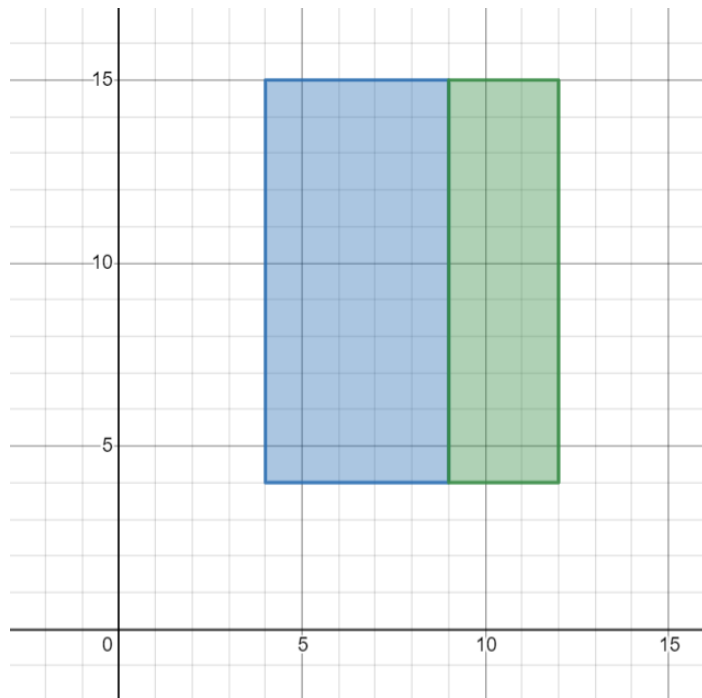
Width B: 5 Height B: 6

Area B: 30 px² Perimeter B: 22 px

Intersection Rectangle of Rect. A & Rect. B: base: (4,4) w: 5 h: 0

Total Perimeter for Both: 44 px

25.





1

 `polygon((4,4),(4,15),(9,15),(9,4))`



2

 `polygon((9,4),(9,15),(12,15),(12,4))`



Rectangle Class:

X coordinate of Rectangle A: 4 y coordinate of Rectangle A: 4

Width A: 5 Height A: 11

Area A: 55 px² Perimeter A: 32 px

X coordinate of Rectangle B: 9 y coordinate of Rectangle B: 4

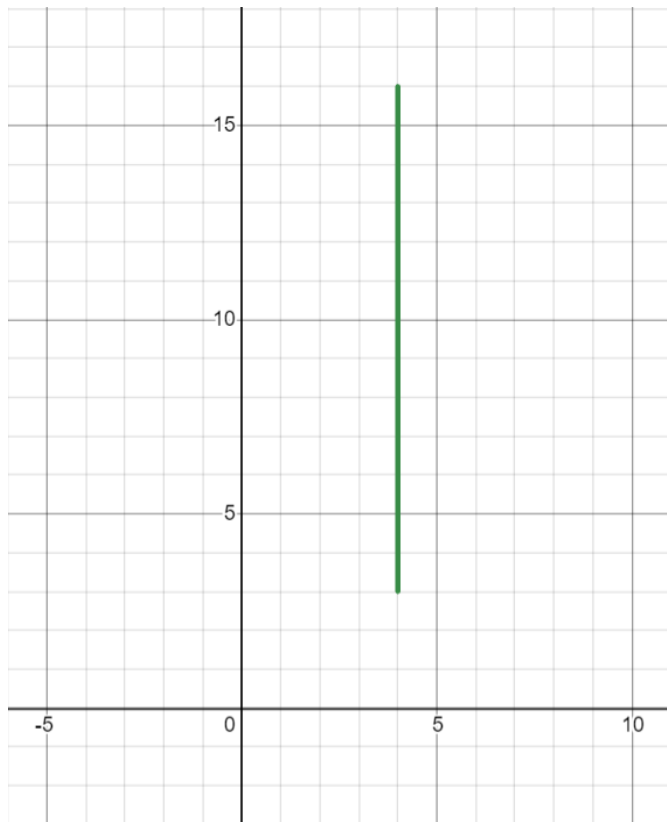
Width B: 3 Height B: 11

Area B: 33 px² Perimeter B: 28 px

Intersection Rectangle of Rect. A & Rect. B: base: (9,4) w: 0 h: 11

Total Perimeter for Both: 38 px

26.



```
1 polygon((4,3),(4,3),(4,16),(4,16))
2 polygon((4,3),(4,3),(4,16),(4,16))
```

Rectangle Class:

X coordinate of Rectangle A: 4 y coordinate of Rectangle A: 3

Width A: 0 Height A: 13

Area A: 0 px² Perimeter A: 13 px

X coordinate of Rectangle B: 4 y coordinate of Rectangle B: 3

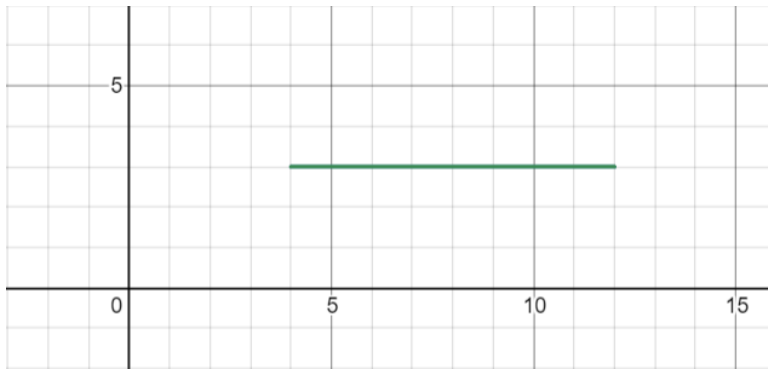
Width B: 0 Height B: 13





Area B: 0 px² Perimeter B: 13 px

Intersection Rectangle of Rect. A & Rect. B: base: (4,3) w: 0 h: 13

Total Perimeter for Both: 13 px

27.



1		<code>polygon((4,3),(4,3),(12,3),(12,3))</code>	
2		<code>polygon((4,3),(4,3),(12,3),(12,3))</code>	

Rectangle Class:

X coordinate of Rectangle A: 4 y coordinate of Rectangle A: 3

Width A: 8 Height A: 0

Area A: 0 px² Perimeter A: 8 px

X coordinate of Rectangle B: 4 y coordinate of Rectangle B: 3

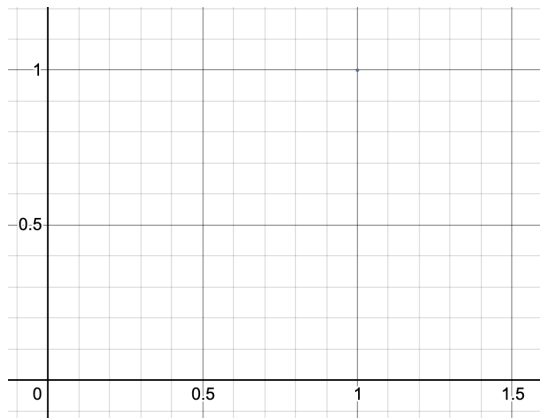
Width B: 8 Height B: 0



Area B: 0 px² Perimeter B: 8 px

Intersection Rectangle of Rect. A & Rect. B: base: (4,3) w: 8 h: 0

Total Perimeter for Both: 8 px

28.



1	 <code>polygon((1,1), (1,1))</code>	
2	 <code>polygon((1,1), (1,1))</code>	

Rectangle Class:

X coordinate of Rectangle A: 1 y coordinate of Rectangle A: 1

Width A: 0 Height A: 0

Area A: 0 px² Perimeter A: 0 px

X coordinate of Rectangle B: 1 y coordinate of Rectangle B: 1

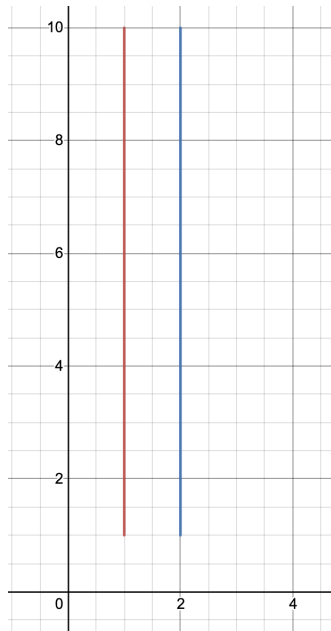
Width B: 0 Height B: 0

Area B: 0 px² Perimeter B: 0 px

Intersection Rectangle of Rect. A & Rect. B: base: (1,1) w: 0 h: 0

Total Perimeter for Both: 0 px

29.



```
1 polygon((1,1), (1,10))
2 polygon((2,1), (2,10))
```

Rectangle Class:

X coordinate of Rectangle A: 1 y coordinate of Rectangle A: 1

Width A: 0 Height A: 9

Area A: 0 px² Perimeter A: 9 px

X coordinate of Rectangle B: 2 y coordinate of Rectangle B: 1

Width B: 0 Height B: 9

Area B: 0 px² Perimeter B: 9 px

The rectangle does not intersect.

Total Perimeter for Both: 18 px

UNIT TESTS ARE ALL PASSING

Unit tests

▶ Run tests

- t1
- t2
- t3
- t7checkArea
- t5checkSetter
- t8bcheckPerimHarder
- t8aCheckPerimeterEasy
- t12acheckTotPerimEasy
- t9acheckContainsEasy
- t9bcheckContainsHard
- t12bcheckTotPerimHard
- t10bcheckIntersectionHarder
- t10acheckIntersectionEasier

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ICS3UW2019Java / Assignment/Assignme...

Stop

Unit tests

Run tests

t1

t2

t3

t7checkArea

t5checkSetter

t8bcheckPerimHarder

t8aCheckPerimeterEasy

t12acheckTotPerimEasy

t9acheckContainsEasy

t9bcheckContainsHard

t12bcheckTotPerimHard

Sketch.java

```
1 /*import processing.core.PApplet;
2 import java.io.BufferedReader;
3 import java.io.File;
4 import java.io.FileNotFoundException;
5 import java.io.FileReader;
6 import java.io.IOException;
7
8 //Use processing to have your program become a visualized program. Have two
9 rectangles start at opposite sides of the screen and move to their final
10 resting places.
11
12 //choice 1: Involve the text file created in part 13. To be used as the input
13 for processing. You will need to review documentation on the BufferedReader
14 in processing's reference pages.
15
16 public class Sketch extends PApplet {
17     //int x1, x2, y1, y2;
18     float Speed = 1;
19     float x1 = 600;
20     float y1 = 600;
21     float x2 = -300;
22     float y2 = -300;
23
24     int[] s = new int[12];
25
26     public void readFile() throws IOException {
27         int i = 0;
28         try {
29             File file = new File("AppletFile.txt");
30             BufferedReader br = new BufferedReader(new FileReader(file));
31
32             while (br.ready()) {
33                 String line = br.readLine();
34                 s[i] = Integer.parseInt(line);
35                 i++;
36             }
37         } catch (IOException e) {
38             e.printStackTrace();
39         }
40     }
41 }
```

Console

Shell

Markdown

OpenJDK Runtime Environment (build 11.0.4-Q x1
-post-Ubuntu-lubuntul18.04.1)
✓ t1
✓ t2
✓ t3
✓ t7checkArea
✓ t5checkSetter
✓ t8bcheckPerimHarder
✓ t8aCheckPerimeterEasy
✓ t12acheckTotPerimEasy
✓ t9acheckContainsEasy
✓ t9bcheckContainsHard
✓ t12bcheckTotPerimHard
✓ t10bcheckIntersectionHarder
✓ t10acheckIntersectionEasier
All tests have passed 13/13