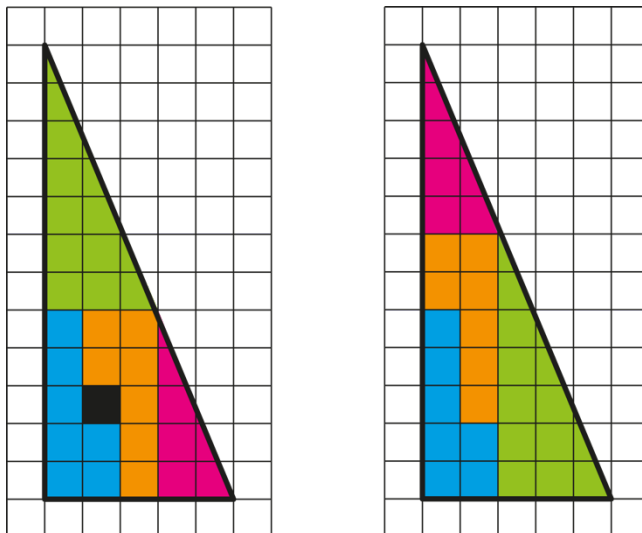


## Rocky and the Black Hole

The size of the big triangle remains unchanged.

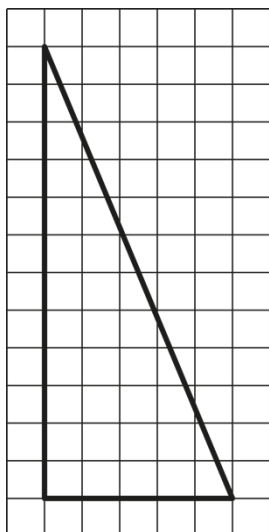


Where does the black hole go when the colored pieces are rearranged?



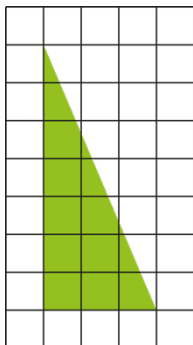
## 1. Area of the six figures

Area of the big triangle



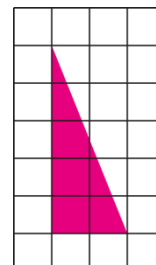
$$\frac{1}{2} \cdot 5 \cdot 12 = 30$$

Area of the green piece



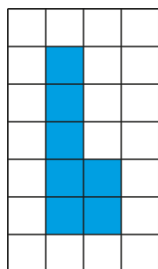
$$\frac{1}{2} \cdot 3 \cdot 7 = 10.5$$

Area of the red piece



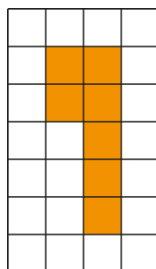
$$\frac{1}{2} \cdot 2 \cdot 5 = 5$$

Area of the blue piece



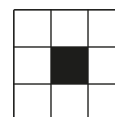
7

Area of the orange piece



7

Area of the black hole

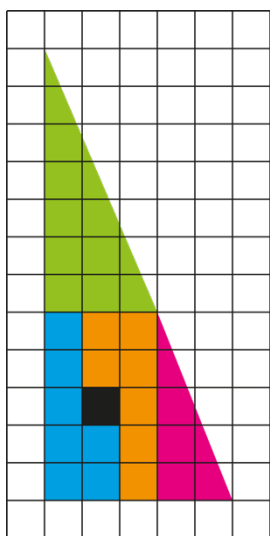


1



## 2. Area of the left and right composition

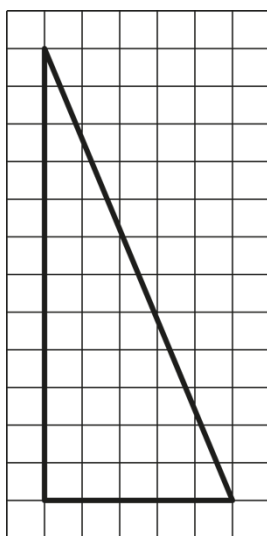
Area of the  
left composition



$$10.5 + 7 + 1 + 7 + 5 \\ = 30.5$$

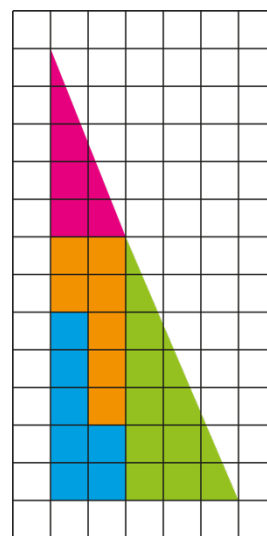
The area is 0.5 larger than  
the area of the big triangle.

Area of the big triangle



$$30$$

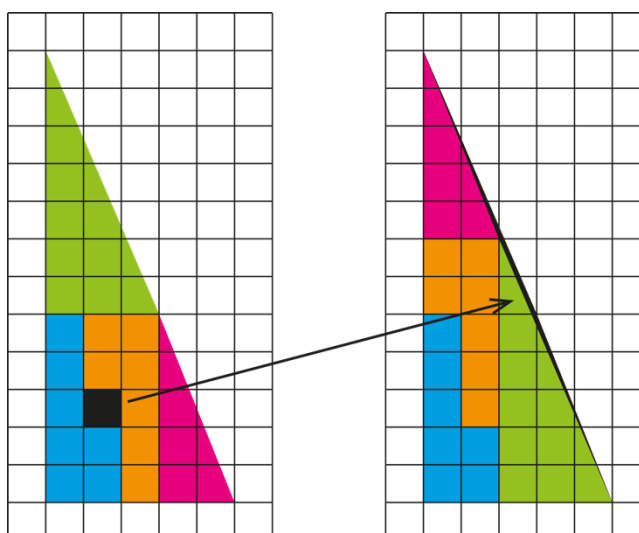
Area of the  
right composition



$$5 + 7 + 7 + 10.5 \\ = 29.5$$

The area is 0.5 smaller than  
the area of the big triangle.

## 3. Optical Illusion



The black hole has moved to the edge of the triangle.

It is not visible because the big triangle has a thick border, creating an optical illusion.

