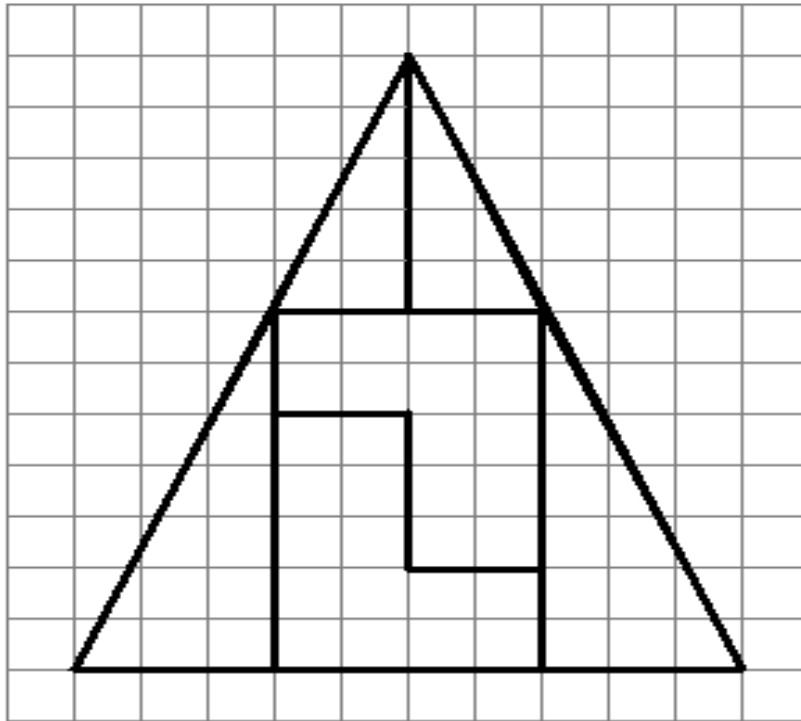
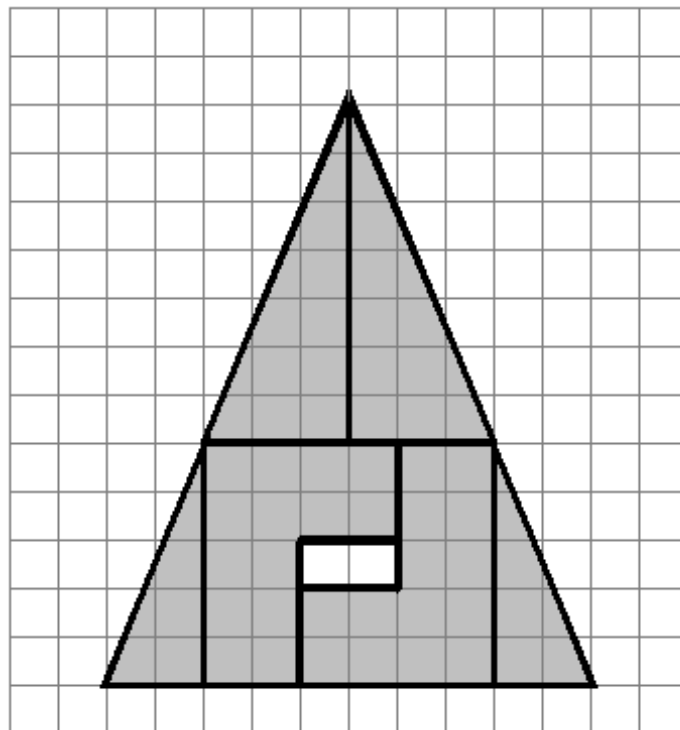


Puzzle 10

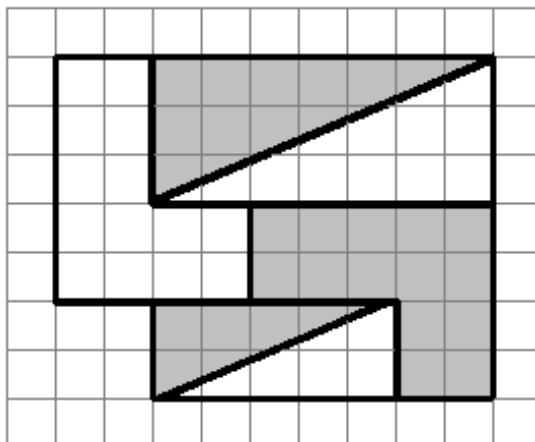
(Paul Curry) Imagine that we cut the figure below out of paper. The area of the triangle is $A = \frac{10 \cdot 12}{2} = 60 \text{ unit}^2$.



Suppose we color the other side of the paper, turn the pieces upside down, and rearrange them to obtain the figure shown below.



Now the area appears to be 58 unit^2 since there is a 2 unit^2 area of a whole that the triangle developed. To make matters worse, we now again rearrange the pieces, turning some of them back to the original side.



The area of this figure is $7(9) - 4 = 59 \text{ unit}^2$.

Logic tells us that areas of figures do not change if we rearrange them or turn them on their other side. So, what is wrong with these pictures, and how much is really the area of these shapes, 58 unit^2 , 59 unit^2 , or 60 unit^2 ?