

IYNT 2014

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Problem №24

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Main problem

Cut a rectangular figure out of a paper sheet sized 9×20 . Now cut it into constituting parts such that one could these parts together into a square.

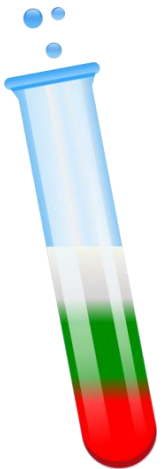


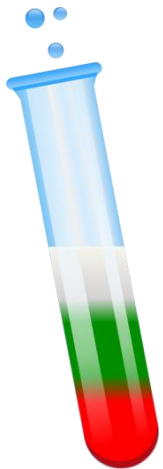
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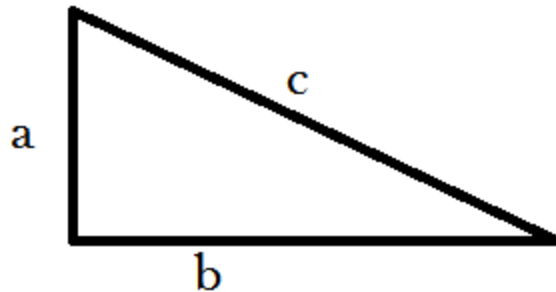


Theory

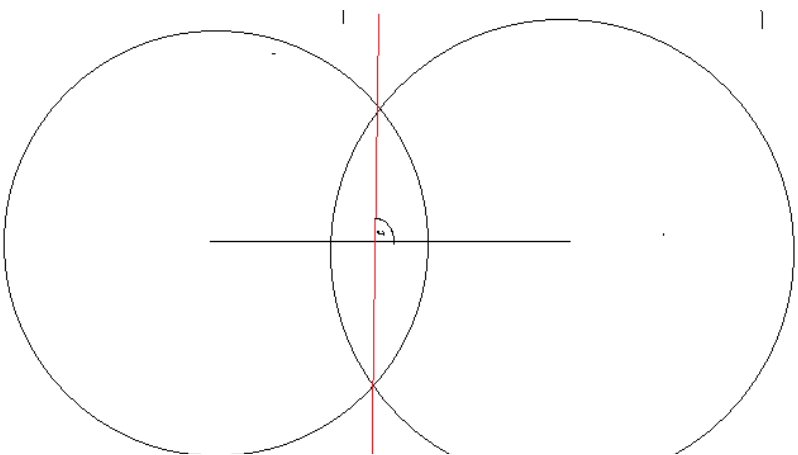
1. $S(\text{square}) = S(\text{rect}) = 9 \times 20 = 180$

2. Side of the square = $\sqrt{180}$

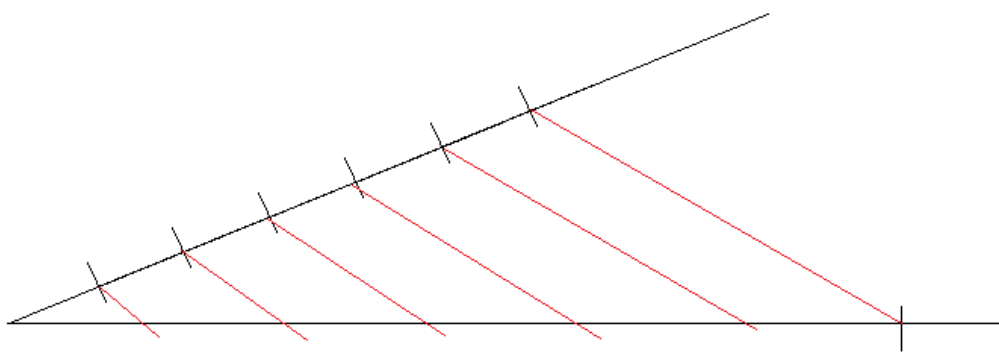
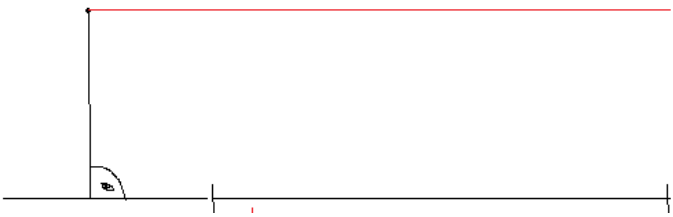
3. We will use the Pythagorean Theorem to get the size of the side. ($a^2 + b^2 = c^2$)



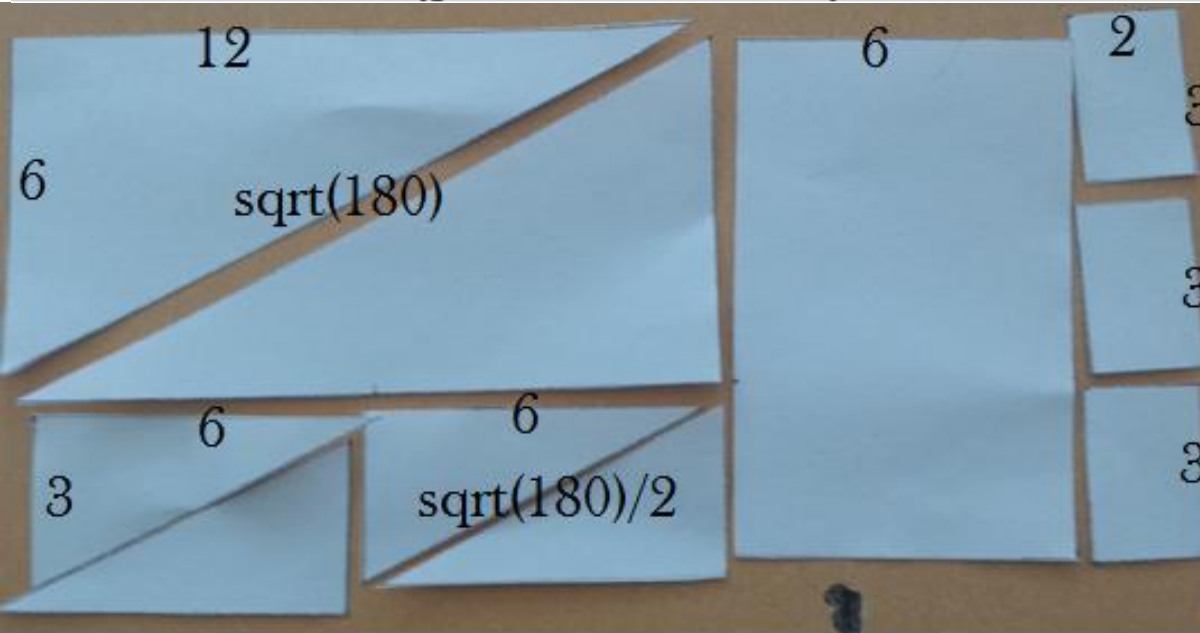
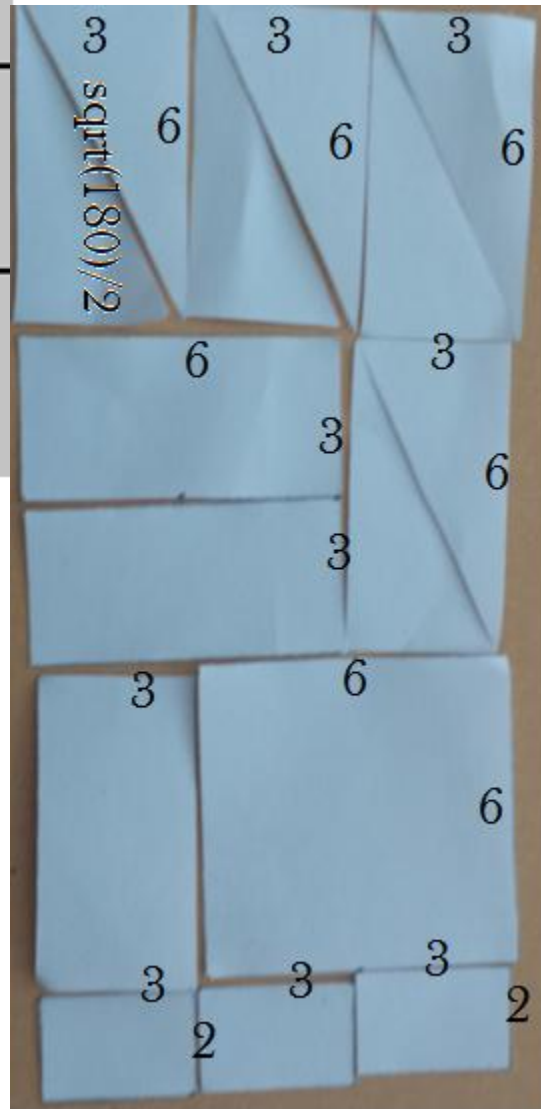
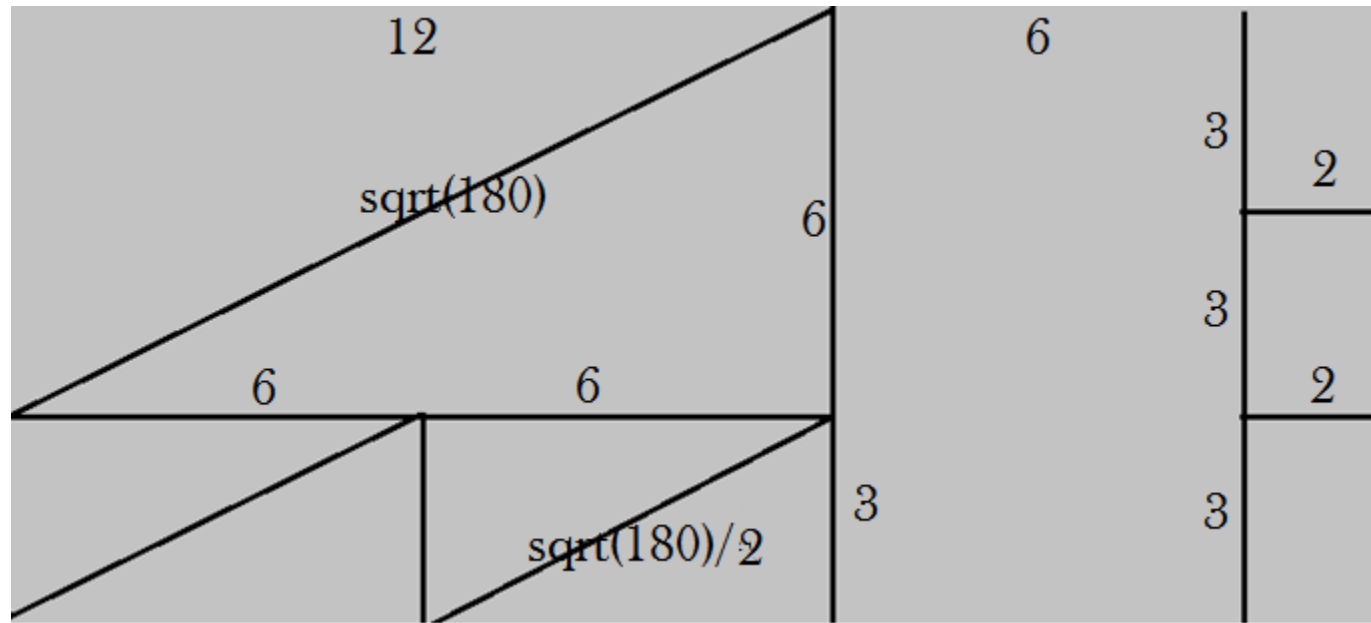
A few needed basic constructions



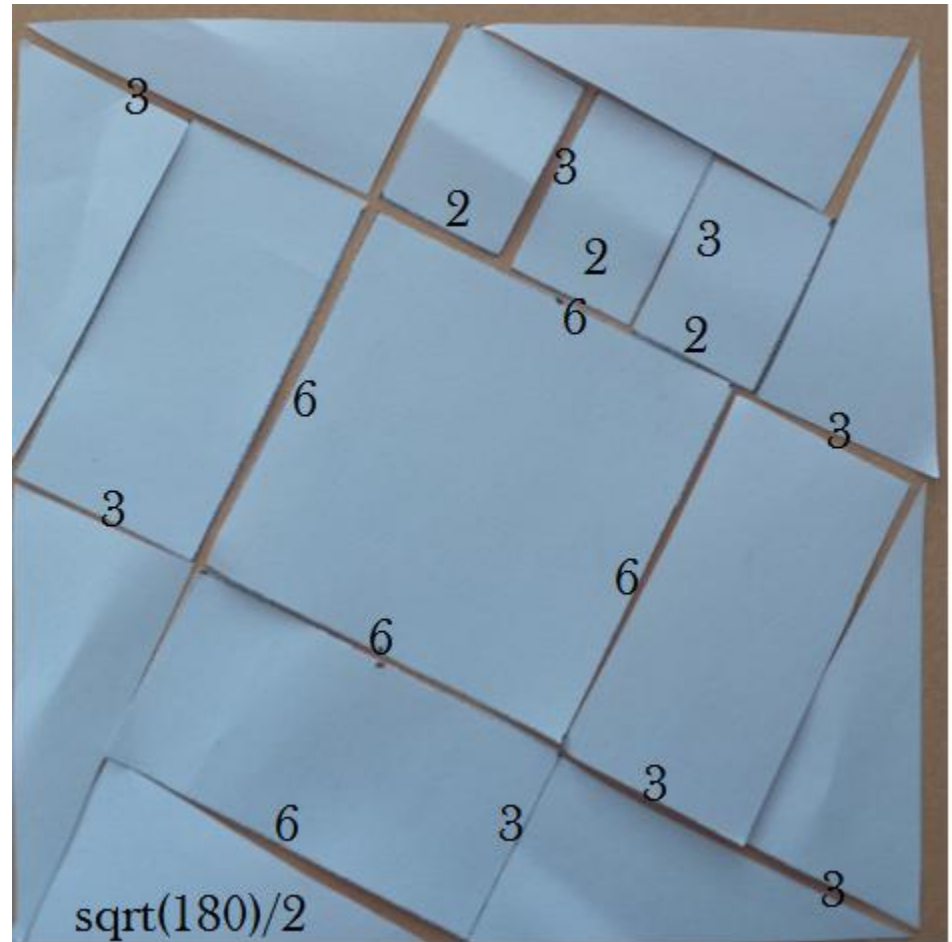
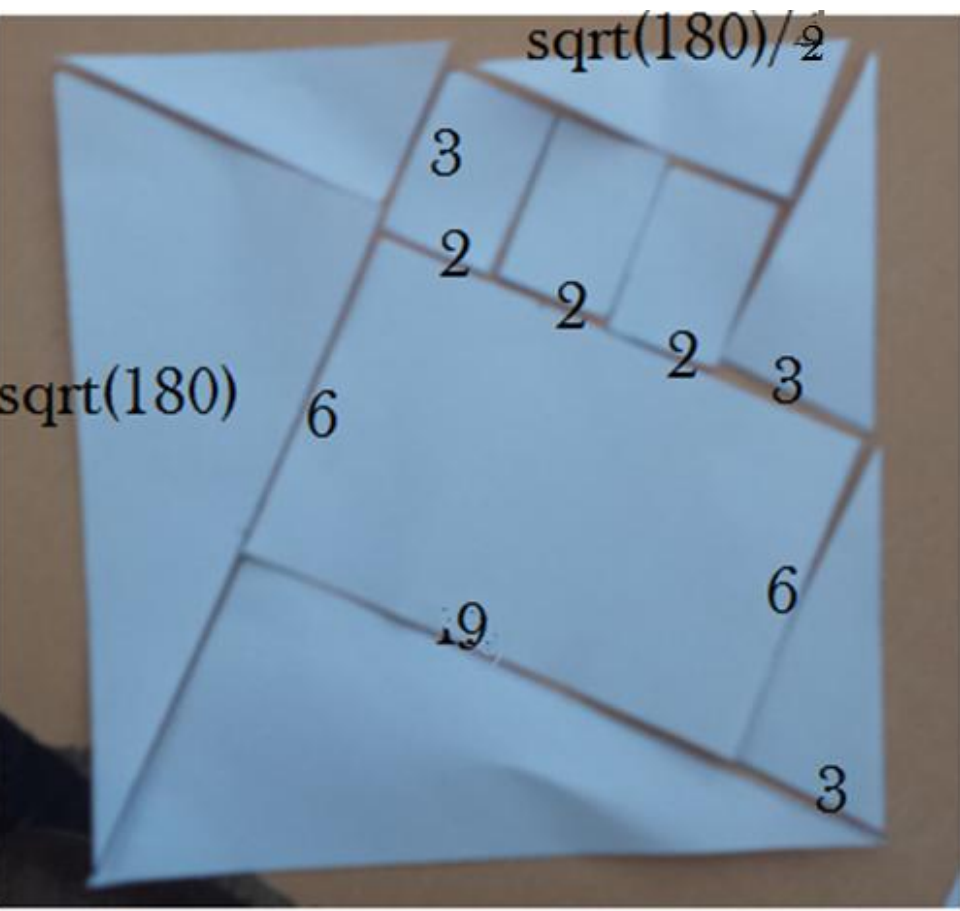
1. Right angle
2. Parallel line
3. Dividing a section into equal sections.



Cutting the parts



Creating the square



THANK YOU FOR YOUR ATTENTION!

