

Tri-Square Rug Game

A rug designer decided to make a rug consisting of three separate square pieces sewn together at their corners, with an empty triangular space between them. The rug was an immediate hit, the designer decided to make more of them. She called these creations “tri-square rugs.” A sample rug is shown here.

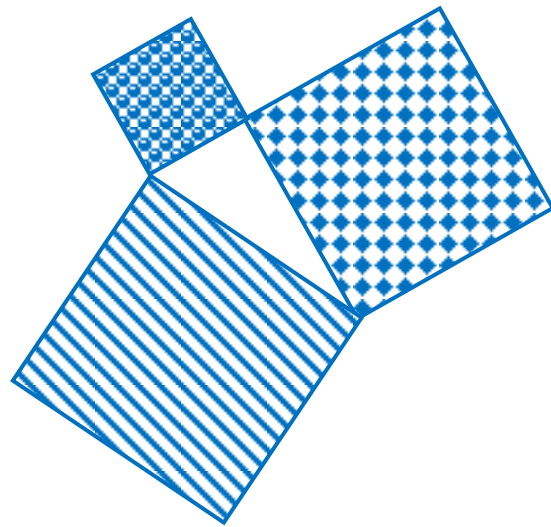
Al and Betty thought these tri-square rugs could be used to make a great game. They made up these rules:

Let a dart fall randomly on the tri-square rug.

- If it hits the largest of the three squares Al wins.
- If it hits either of the other two squares Betty wins.
- If the dart misses the rug simply let another dart fall.

Your challenge is to design 4 rugs - one each for Al wins, Betty wins, and Fair Game plus one of any type. Glue your rugs to unlined paper. **Label who wins and total area on each square.** On Al’s winning rugs, color the triangle red. On Betty’s winning rugs, color the triangle blue. On the Fair Game rugs, color the triangle green.

Analyze each triangle and see if you can determine a pattern as to who the winner will be.



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