A Marching Strip

A king wants to make a new courtyard that is covered with tiles, some tiles being more expensive than others. The more expensive tiles are stronger and more resistant to wear. The stronger tiles must come from one corner of the courtyard to another.

I decided to start by basing my solution off the original diagram offered to us from the pow paper. What I noticed is that the number of shaded tiles was 8, and the total area was 24, meaning that one in 3 tiles were shaded pink. I tried using this pattern on different types of courtyards and came to a conclusion. I add the number of rows and columns together and then subtract their greatest common denominator, in order to determine how many expensive tiles would be needed. That is the pattern I formed that I believe works with any size courtyard.

*Using this formula, I found that the number of expensive tiles was 144.*

**6 by 10 Courtyard**

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(5+10)-5=10

I think that this POW challenged me but I was miraculously able to find the solution. I tried hard and I think next time I should do this with other students to compare our thoughts and answers.