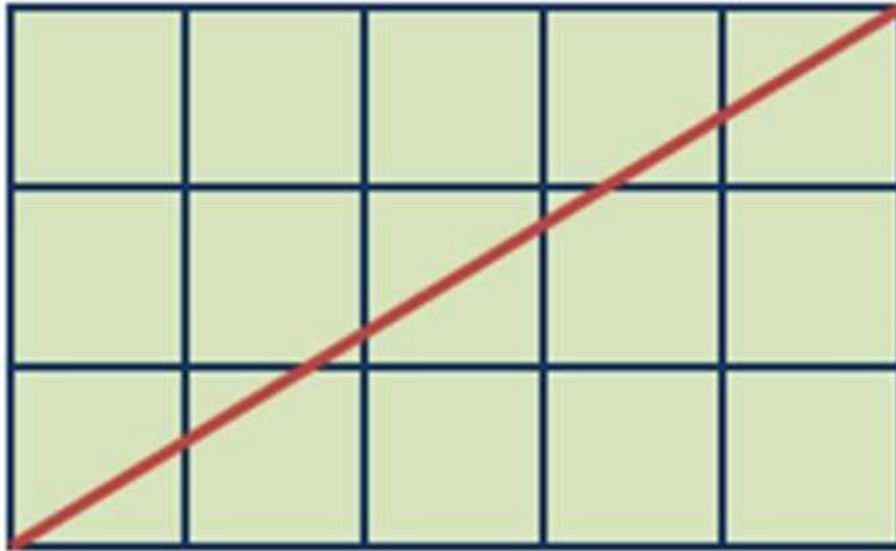


Challenge 12: Grid Intersections

How many 1×1 squares does the diagonal line pass through in the 3×5 rectangle shown below?



How many 1×1 squares does the diagonal line of an $n \times m$ rectangle pass through?

Make sure you justify your answer clearly.