

Problem F

Famous Paintings

You are one of the most famous painters, Vincent Van Gogh and now you are thinking of painting another masterpiece. Everyone knows that your most famous paintings always contain geometric figures, specifically figures with exactly 4 sides, the interpretation of a simple figure in so many colors and in so many contexts is what made you the most famous painter.

Now, you are in front of your canvas painting your soon-to-be-famous starry night. In your canvas, there are already N stars and you want to connect 4 of these stars to show a quadrilateral constellation. In how many ways you can choose these 4 stars to make a quadrilateral figure?

Input

In the first line, you will have an integer N ($1 \leq N \leq 100$) that represents the number of stars on the canvas.

Each of the next N lines contains two integer X , and Y separated by a space ($0 \leq X, Y \leq 10^6$) that represent the coordinates of the a_i star, no two stars share the same point.

Output

Output a single line with an integer indicating the total ways you can choose 4 stars to draw your quadrilateral figure.

Input example 1 5 10 10 10 20 20 20 20 10 25 15	Output example 1 5
Input example 2 6 1 1 2 2 3 3 5 10 20 10 20 5	Output example 2 12
Input example 3 7 2 8 9 4 3 1 38 43 10 11 49 31 30 20	Output example 3 35