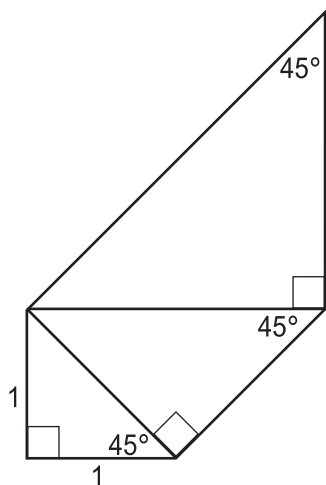


Grade Eight Sample Test Item—Problem Solving & Modeling and Data Analysis

Achievement Level: Standard Exceeded

Steven is making a pattern of a spiral as shown in the figure.



He started by making an isosceles right triangle with legs of length 1. He then made a new isosceles right triangle, using the hypotenuse of the first triangle as one of the legs of the new right triangle. He will continue making right triangles using this pattern until he has made a triangle with a hypotenuse with a length of 8.

Determine how many of these triangles, including the three shown in the figure, Steven will make.

← → ↶ ↷ ✖

1	2	3
4	5	6
7	8	9
0	.	-

Area

Problem Solving & Modeling and Data Analysis

Using appropriate tools and strategies to solve real world and mathematical problems

Standard(s)

Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.

Answer

6