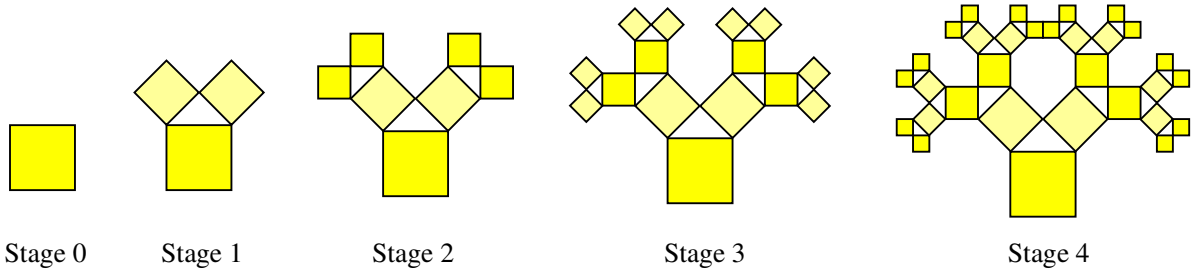# PYTHAGORAS TREE

COURSE/LEVEL: *NSW Secondary High School Stage 5 Mathematics – Additional Content*

Consider the square at Stage 0 as being constructed on the hypotenuse of a right-angled isosceles triangle. At the next stage of iteration, two smaller squares are added to the two smaller sides of this triangle. This is repeated for each of the smaller squares at the next stage, and so forth.

Stage 0   Stage 1   Stage 2   Stage 3   Stage 4

1.   Complete the following table for the Pythagoras Tree.

Stage	Number of new squares	Total number of squares	Area of each new square	Total area of Pythagoras tree
0	1	1	1	1
1	2	3	½	2
2	4	7	¼	3
3				
4				
5				
6				
n				