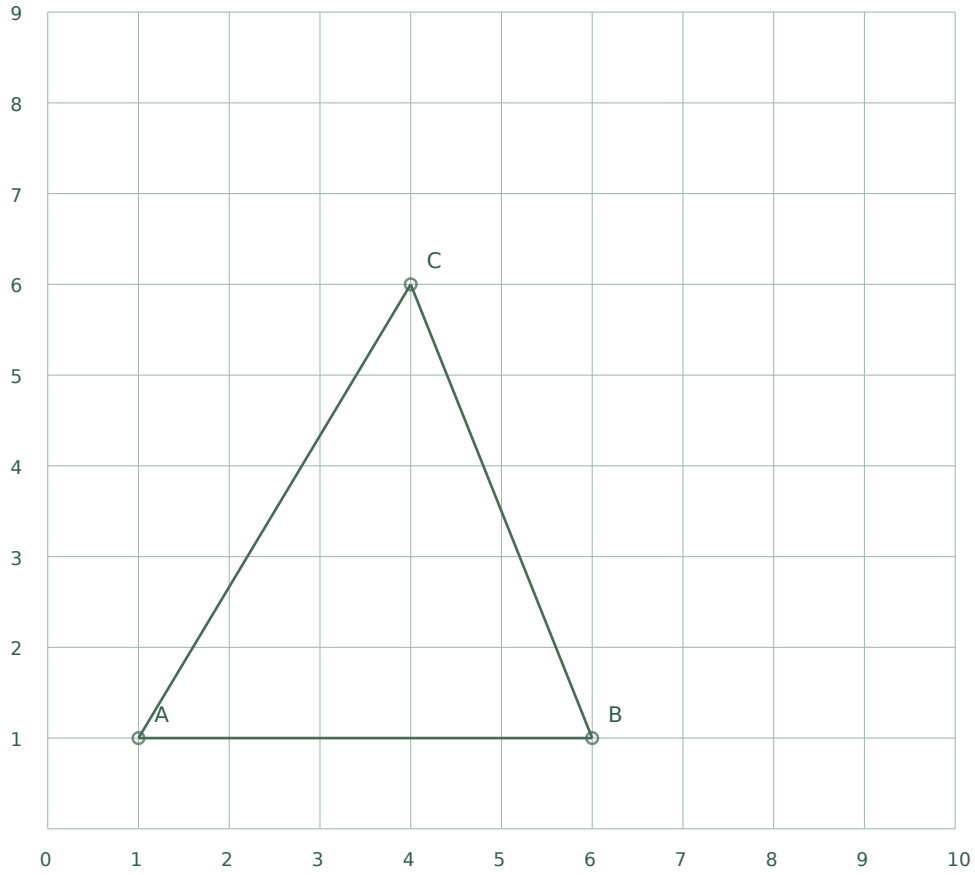
Reference / reference

Chosen physical pitch 12 mm / one grid square = one abstract unit



Side lengths (units): 5.0, 5.3852, 5.831. All three lengths differ: scalene.

Draw a Large Scalene Triangle on Grid Paper: Plotting from Coordinates and Side Lengths

Original worked example / unchanged complete key

Prompt: Plot a triangle with vertices A(1,1), B(6,1), and C(4,6) on grid paper where one square equals one unit. Confirm it is scalene and state the side lengths.

Answer: Side AB is horizontal from (1,1) to (6,1), length 5 units. Side AC spans 3 right and 5 up, so its length is the square root of 34, about 5.83 units because 9 plus 25 equals 34. Side BC spans 2 right and 5 up, so its length is the square root of 29, about 5.39 units because 4 plus 25 equals 29. The lengths are 5, about 5.83, and about 5.39, all different, so the triangle is scalene. Check: 3 squared plus 5 squared equals 34, and 2 squared plus 5 squared equals 29; neither equals 25, so no side repeats the base length, and the two diagonal lengths differ because 34 is not equal to 29.