

SS8.1

Standards for
Mathematical Practice

4 Look for and
make use of structure

Standards for
Mathematical Practice

8 Look for and
express regularity in
repeated reasoning

Activity 13.12 FINDING PYTHAGOREAN TRIPLES: 3-4-5 IN DISGUISE

Begin with the most common Pythagorean triple, 3-4-5. Ask, "Will triangles that are similar to the 3-4-5 triangle also be Pythagorean triples?" Give students a ruler, grid paper, and a calculator (or have them explore the options with dynamic geometric software). Ask students to find at least three triples that form triangles similar to the 3-4-5 triangle. (Note: There are infinitely many, so once students notice a pattern, stop the exploration and discuss strategies for how to recognize the 3-4-5 in disguise.)

Recognizing Pythagorean triples saves the step of having to use the Pythagorean theorem to find the length of a missing side.

From Van de Walle et. al. (2014). *Teaching Student-Centered Mathematics Grades: Developmentally Appropriate Instruction for Grades 6 – 8 (2nd Ed.)*. Toronto: Pearson Education, Inc. (p. 282).