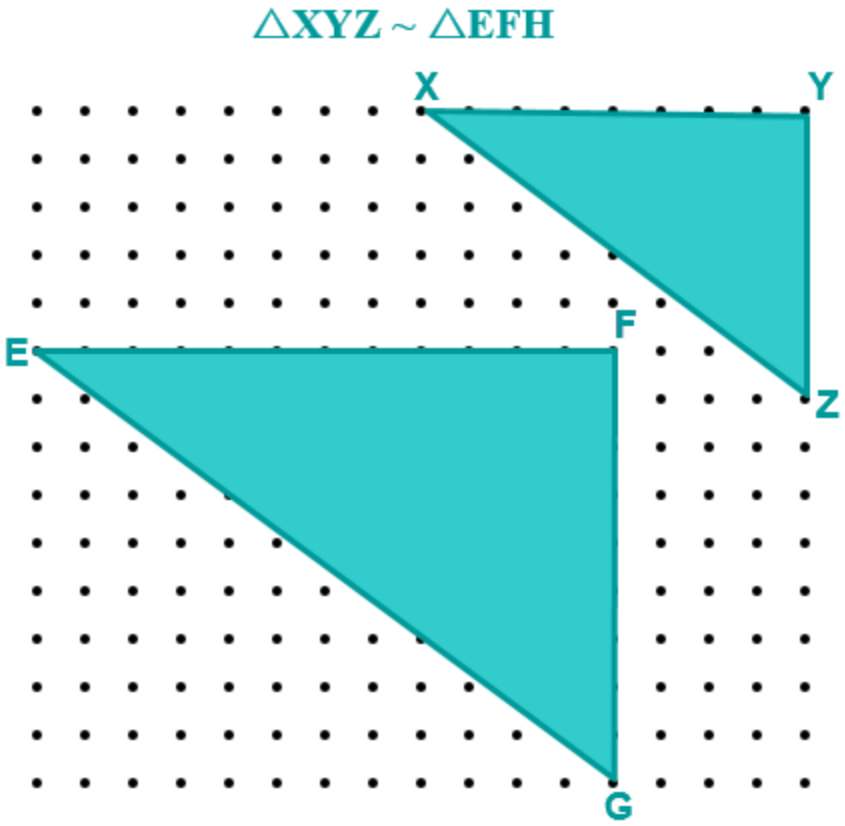
MATH170U22
Congruent and Similar Shapes, Pythagorean Theorem
Question 15




a. Sides YZ and FG are corresponding sides. These corresponding sides can be expressed as a ratio in fraction form, $\frac{YZ}{FG}$. Identify the other two pairs of corresponding sides and write them in fraction form.

b. The length of "leg" YZ is 6 units, determined by counting the spaces between the dots along the side of triangle XYZ. Write the name of the other "leg" in this triangle and then write its length. Write the names of the "legs" of triangle EFG and then write the length for each leg.

c. Identify the hypotenuses for each of the triangles and then calculate their lengths by using the Pythagorean Theorem. Write the name and length for both of the hypotenuses.

d. Now using the actual lengths of the sides, write a fraction for the three pairs of corresponding sides. Refer back to question "a" for the fractions for corresponding sides, and questions "b" and "c" for the actual lengths.

e. Simplify each of the fractions written in "d". What is the scale factor for the two similar triangles?