Congruence Transformations

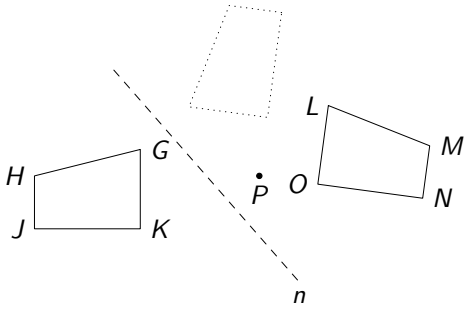
Today I Can

1. Identify congruence transformations.
2. Prove triangle congruence using isometries.

Example 1. The composition $(R_n \circ r_{(90°,P)})(LMNO) = GHJK$ is shown.

(a) Which angle pairs have equal measure?

(b) Which sides have equal lengths?

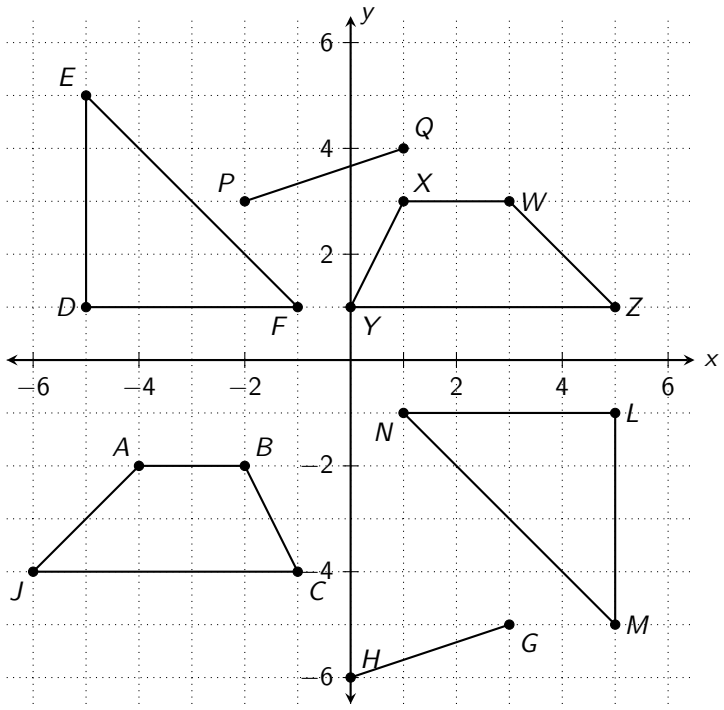


Congruent Figures

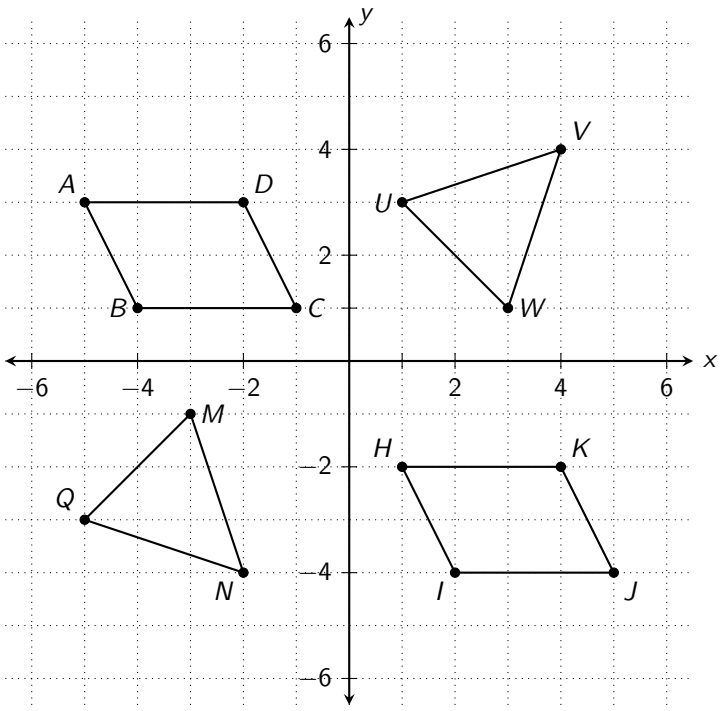
Two figures are congruent if and only if there is a sequence of one or more rigid motions that maps one figure onto the other.

Example 2. Which pairs of figures in the grid are congruent? For each pair, what is a sequence of rigid motions that maps one figure to the other?

(a)

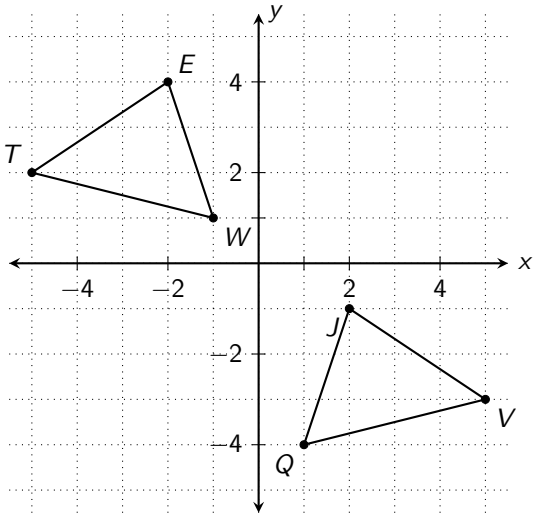


(b)



Example 3. Given each pair of congruent triangles, find a congruence transformation that maps

(a) $\triangle JQV$ onto $\triangle EWT$



(b) $\triangle NAV$ onto $\triangle BCY$