

Define the following terms:

Translation

Reflection

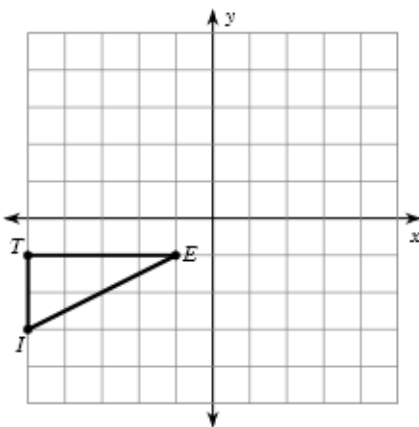
Congruent

Similar

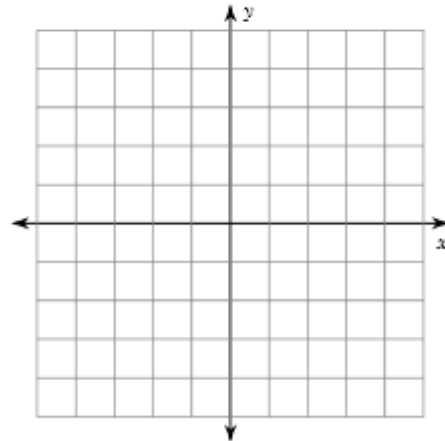
How can you tell if two figures are similar?

How can you tell if two figures are congruent?

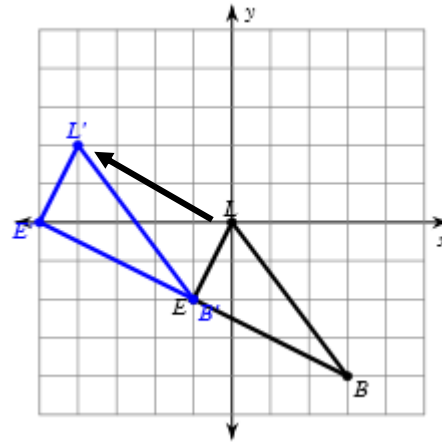
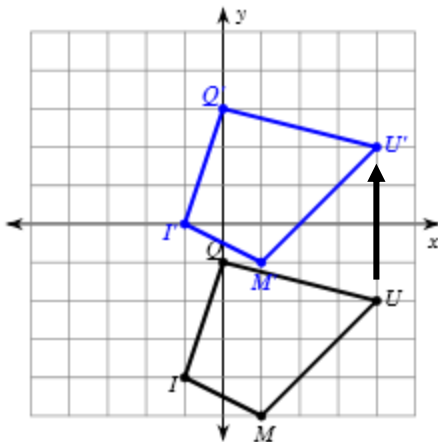
1. Translate the image 5 unit right, and 2 units up.



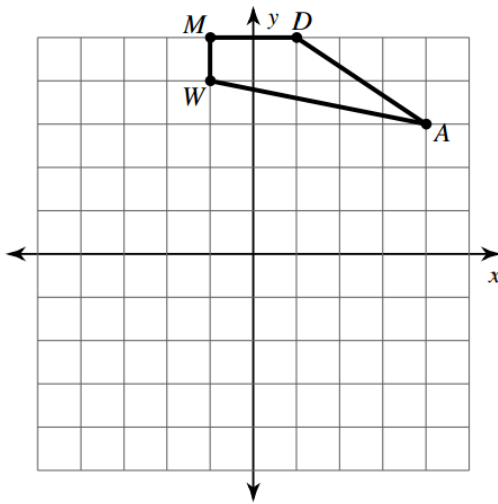
2. Translate the figure 5 units up and 1 right.
 $U(-3, -4), M(-1, -1), L(-2, -5)$



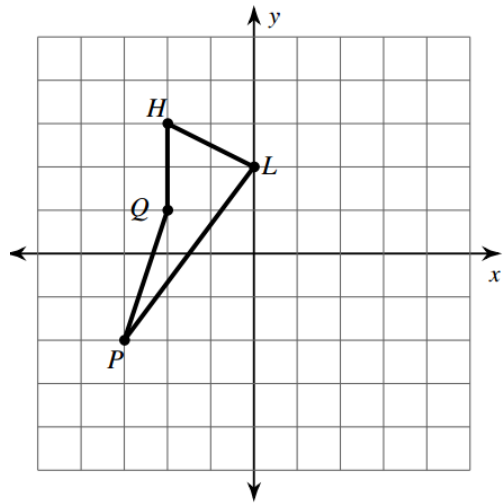
3. Write a rule to describe each translation. Then choose a new translation and perform it for each figure below.



4. reflection across the x-axis



5. reflection across y-axis



6. The table below shows the coordinates of triangle PQR .

a. Fill in the table to the right for the coordinates of P' , Q' , and R' after a reflection about the x -axis.

b. On the grid below, draw triangle PQR and triangle $P'Q'R'$.

c. Now take triangle $P'Q'R'$ and reflect it across the y -axis to create triangle $P''Q''R''$.

d. Are these three triangles all congruent, or similar? Why?

| Triangle PQR | | Triangle $P'Q'R'$ | |
|----------------|-----------|-------------------|--|
| P | $(-3, 2)$ | P' | |
| Q | $(-3, 6)$ | Q' | |
| R | $(-7, 7)$ | R' | |

