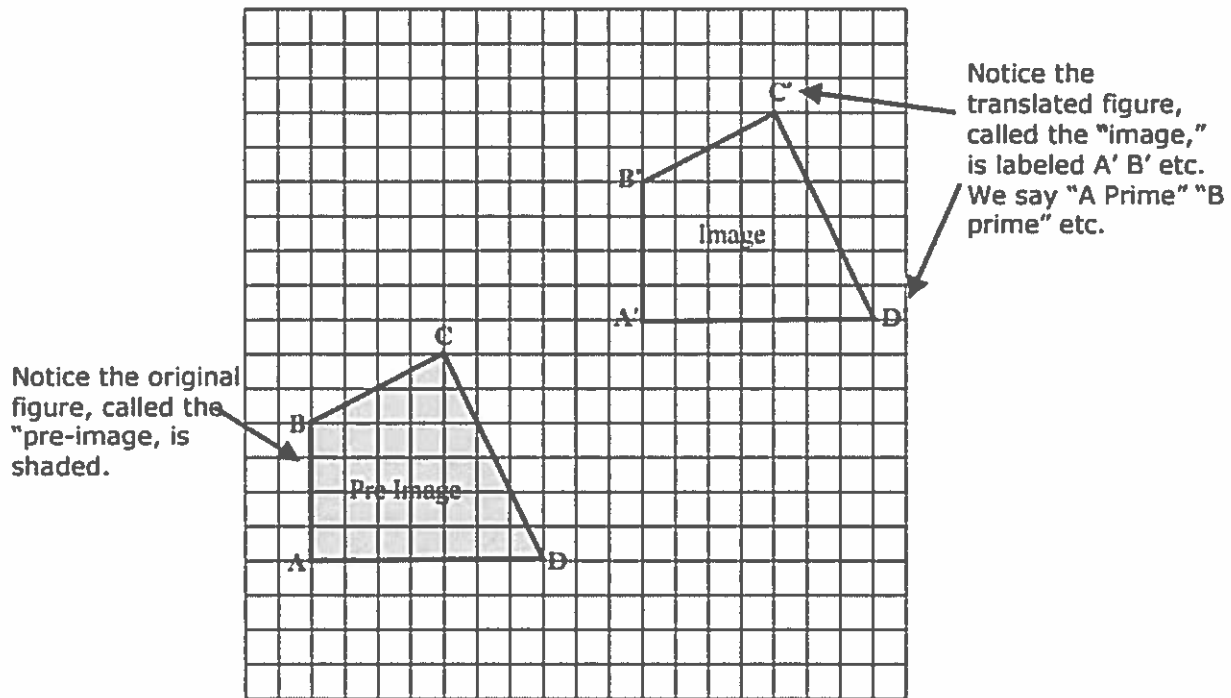


Isometric Transformations: Translations

Translation: A translation is a transformation consisting of a constant offset with no rotation or distortion.

In other words, a translation is a transformation in which a geometric figure is "moved" so that it is not turned or changed in any way. Look at the example below...



Here is some of the language of transformations. Complete each sentence below.

- | | |
|--------------------------------|---|
| 1. A is taken to _____. | 2. \overline{CD} is taken to _____. |
| 3. B maps to _____. | 4. $\angle BCD$ maps to _____. |
| 5. C' is the image of _____. | 6. Figure $A'B'C'D'$ is the image of _____. |

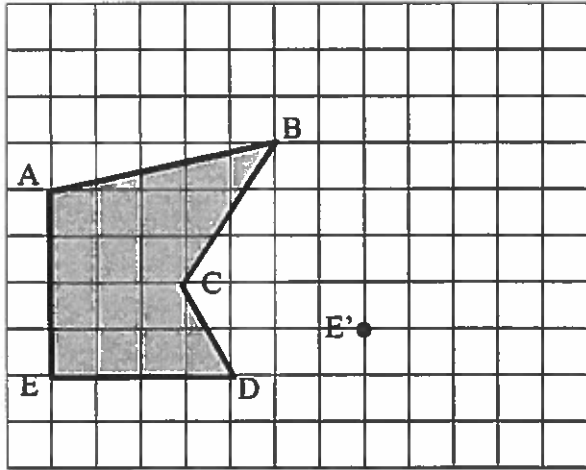
7. Write the rule that was used for this translation.

8. Translate $A'B'C'D$ to $A''B''C''D''$ by using the following rule: $(x,y) \rightarrow (x, y-9)$

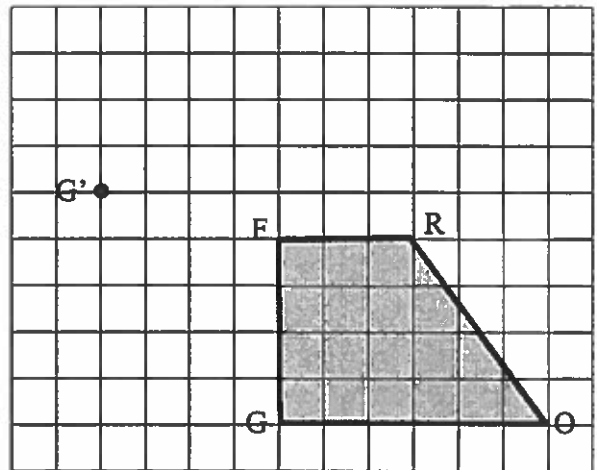
9. Write a congruency statement including all three figures.

Directions: Perform each translation, and write a rule.

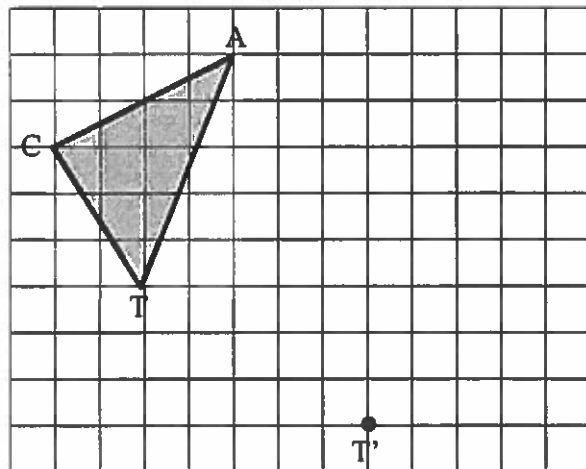
1. Translate $ABCDE \rightarrow A'B'C'D'E'$



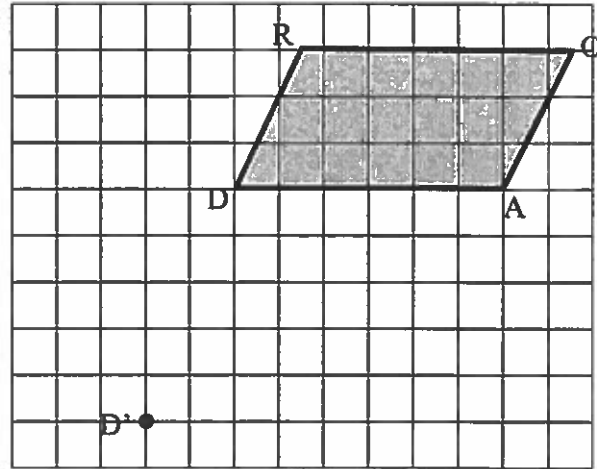
2. Translate $FROG \rightarrow F'R'O'G'$



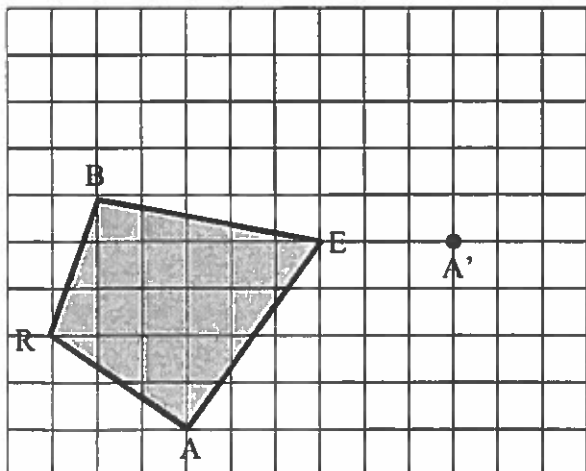
3. Translate $CAT \rightarrow C'A'T'$



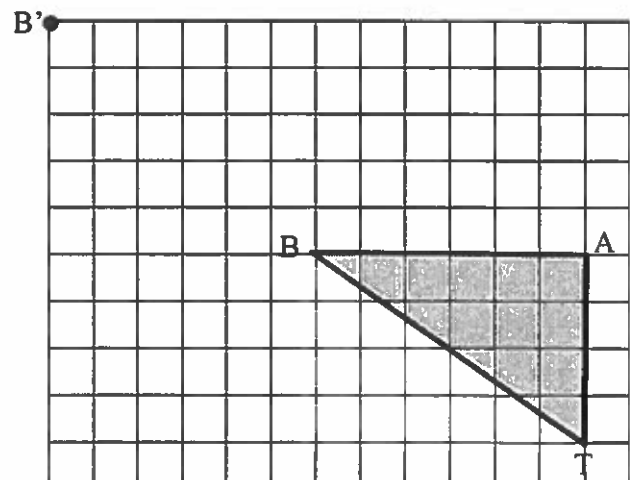
4. Translate $ROAD \rightarrow R'O'A'D'$



5. Translate $BEAR \rightarrow B'E'A'R'$

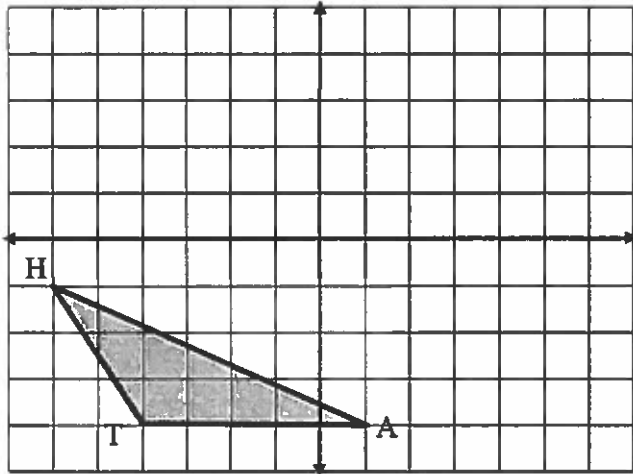


6. Translate $BAT \rightarrow B'A'T'$

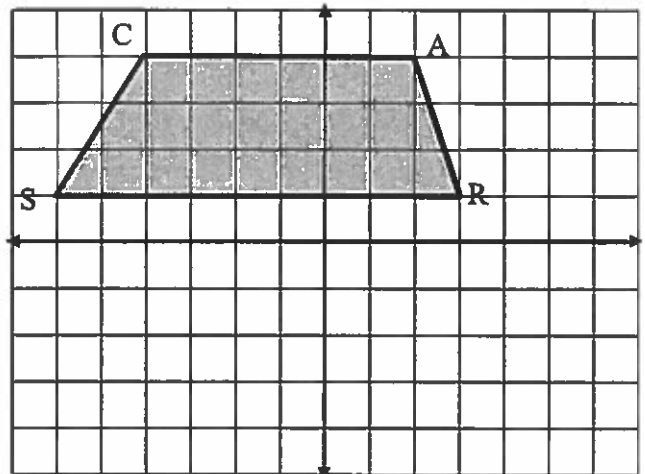


Directions: Use patty paper, Geometry Software, or any other method available to you, to translate each figure using the given function.

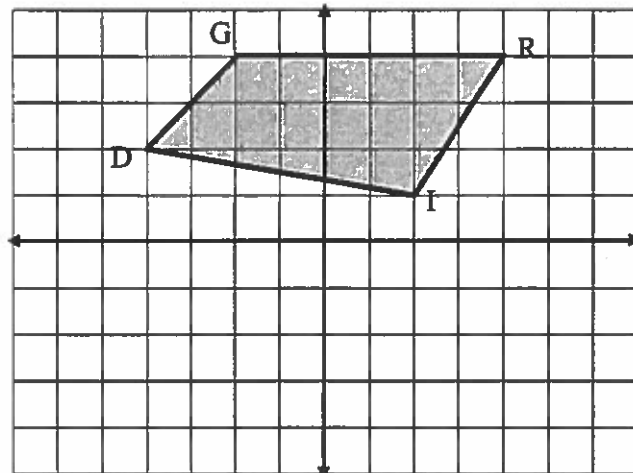
1. Use $(x,y) \rightarrow (x+5, y+3)$



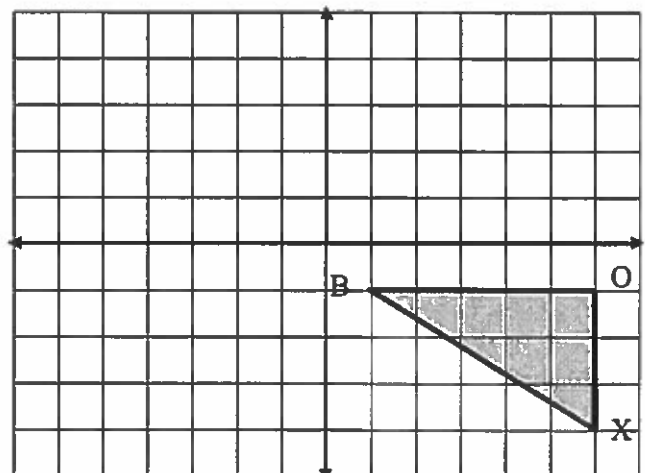
2. Use $(x,y) \rightarrow (x-3, y+5)$



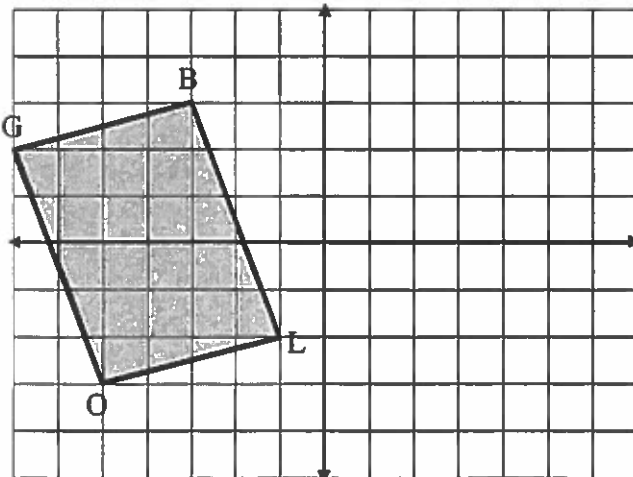
3. Use $(x,y) \rightarrow (x-2, y-5)$



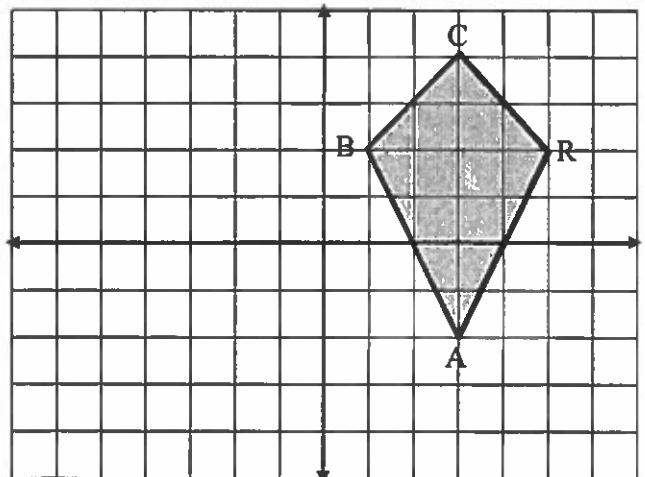
4. Use $(x,y) \rightarrow (x-7, y+4)$



5. Use $(x,y) \rightarrow (x+8, y)$



6. Use $(x,y) \rightarrow (x+7, y+1)$



Directions: Write a geometric function that describes each translation.

