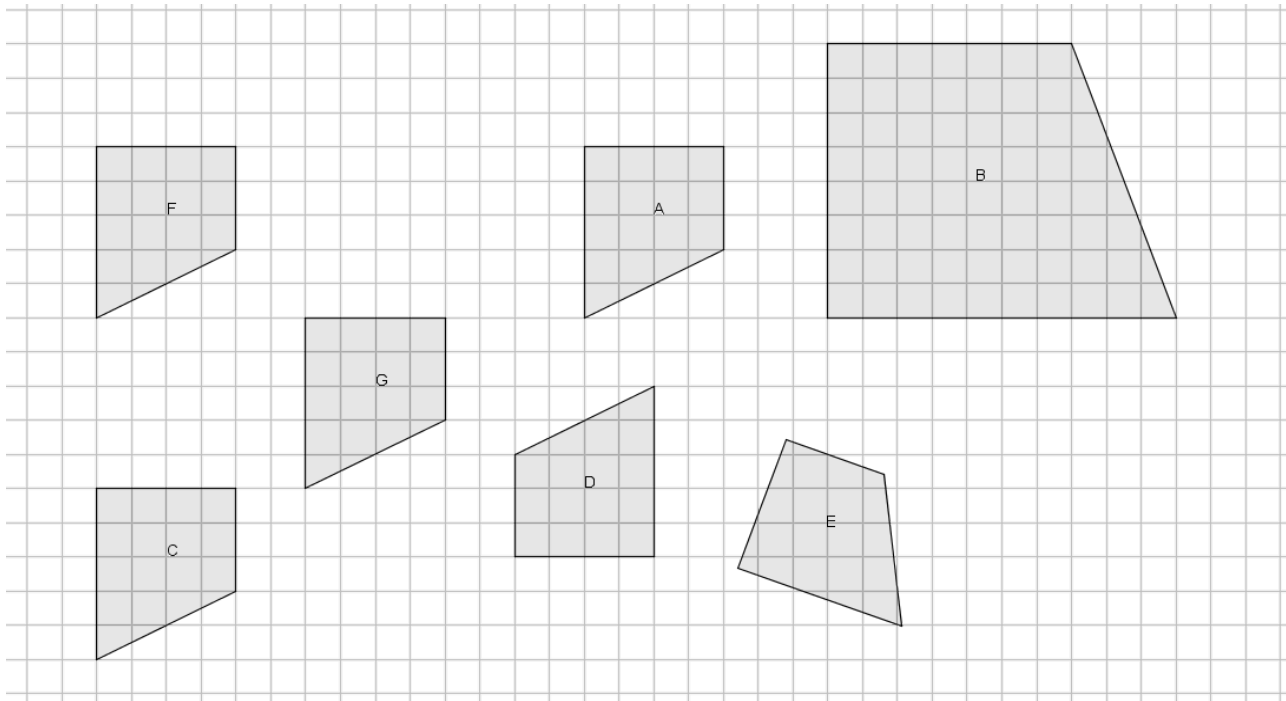


# WORKSHEET: TRANSLATION

Look at the picture below:



Answer to these questions:

- Which figures have the same perimeter as figure F? \_\_\_\_\_
- Which figures have the same area as figure F? \_\_\_\_\_
- Which figures are congruent to figure F? \_\_\_\_\_

Describe, for every figure which is congruent to figure F, the movement to overlap ["sovrapporre"] the two figures.

-----  
-----  
-----  
-----  
-----

Use these phrases: 4 units east/west; 3 units north/south.

Draw an arrow which connect two correspondent point, what can you observe?

The length of the segments is \_\_\_\_\_

The arrows have \_\_\_\_\_ direction.

**The process you observe is named TRANSLATION**

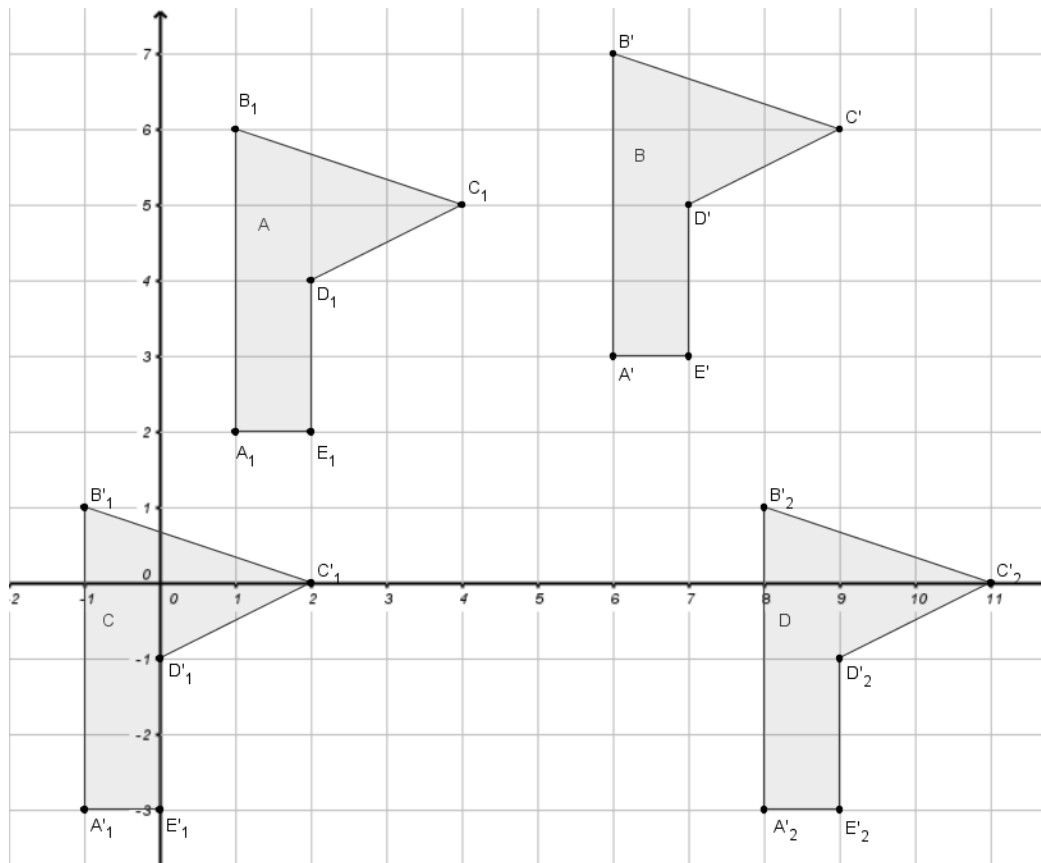
In a translation every point of the object must be moved in the same direction and for the same distance.

The initial object is called the pre-image and the object after the translation is called the image.

In a Cartesian plane take the point  $A(1;2)$ , it is translated in  $(1+3;2+4)$  so  $A'(4;6)$ .

## EXERCISES:

1. Draw the figure which has coordinates A(5;4), B(1;6), C(1;2) e D(0;4). Translate with T(6;1) and draw the new figure.
2. Draw the figure which has coordinates A(0;1), B(3;1), C(5;5), D(2;3) and E(1;5). Translate with T(-4;-5) and draw the new figure.
3. The diagram below shows the shape A,B,C,D.



Which translation represent the movement

- **A to C**  $\rightarrow$  T(\_\_\_\_;\_\_\_\_)
- **B to D**  $\rightarrow$  T(\_\_\_\_;\_\_\_\_)
- **D to B**  $\rightarrow$  T(\_\_\_\_;\_\_\_\_)
- **A to D**  $\rightarrow$  T(\_\_\_\_;\_\_\_\_)

4. Construct a map to explain the translation to your classmates.