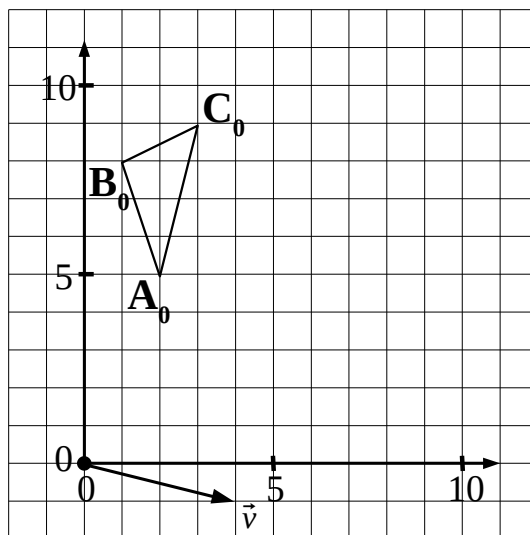


1. Vector  $\vec{v}$  presents motion of the plane occurring each second.

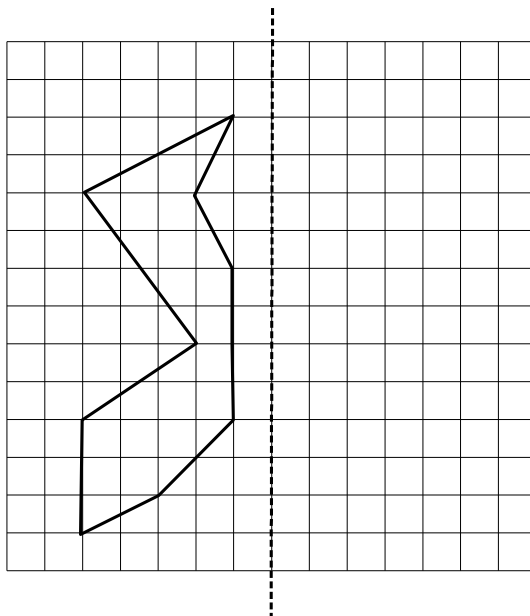
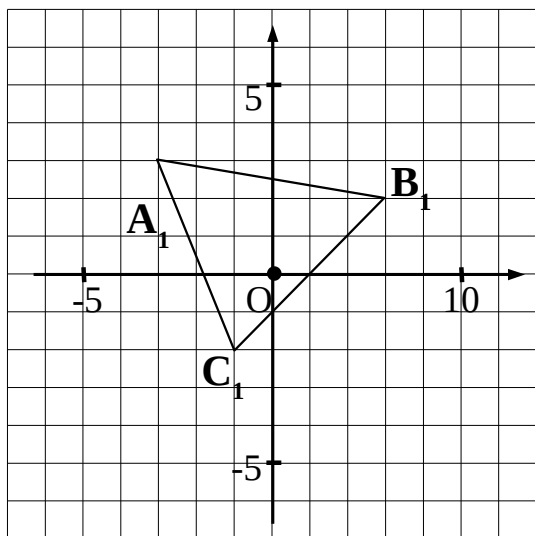
Initially a triangle is located at the position  $\triangle A_0 B_0 C_0$

Find  $\triangle A_1 B_1 C_1$ , the position of the original triangle after 1 second.

Find  $\triangle A_2 B_2 C_2$ , the position of the original triangle after 2 seconds.



2. Plot the mirror image of the shape.

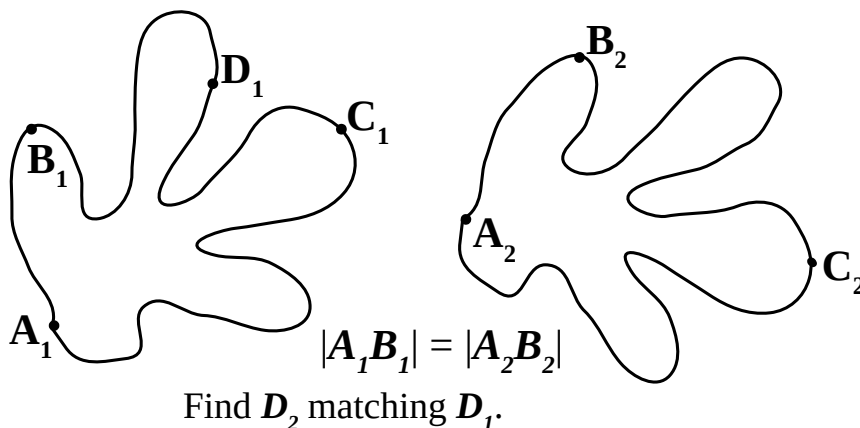


3. Plot  $\triangle A_2 B_2 C_2$  produced by stretching  $\triangle A_1 B_1 C_1$  twice together with the plane so that for every point  $X_1$  and its image  $X_2$ :  $\overrightarrow{OX_2} = 2\overrightarrow{OX_1}$

### Congruency.

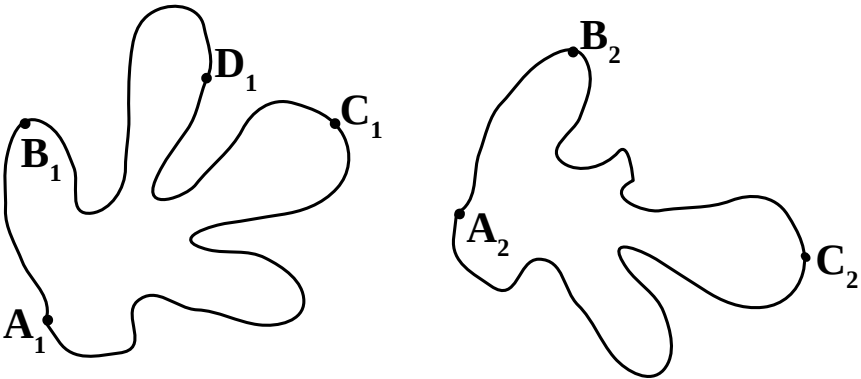
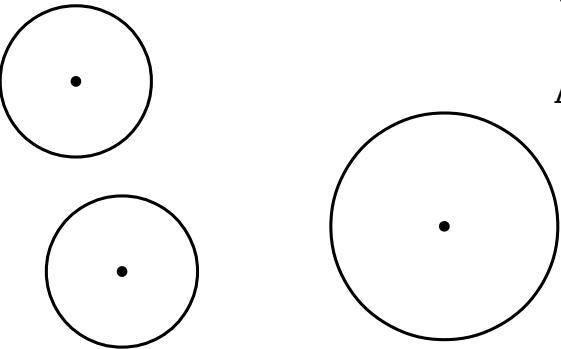
Sometimes points of two shapes can be matched in such a way that the distance between any two points is equal the distance between the two matching points.

Such two shapes are called **congruent**.



3. Show that the two shapes on the drawing are not congruent.

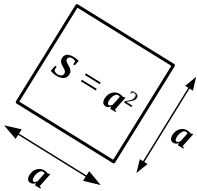
4. When are two circles congruent?



**Squares:**

*a product of a number and itself is called its square:*

$w^2 = w \cdot w$



5. Remove parenthesis:

$2 \cdot (x + 1) =$  \_\_\_\_\_

$x \cdot (x + 1) =$  \_\_\_\_\_

$2 \cdot (x - 1) =$  \_\_\_\_\_

$x \cdot (x - 1) =$  \_\_\_\_\_

$2x \cdot (x + 1) =$  \_\_\_\_\_

$2x \cdot (x - 1) =$  \_\_\_\_\_

$x \cdot (2x + 1) =$  \_\_\_\_\_

$x \cdot (2x - 1) =$  \_\_\_\_\_

$3x \cdot (2x + 1) =$  \_\_\_\_\_

$3x \cdot (2x - 1) =$  \_\_\_\_\_

6. Fill in the table to plot a graph of the function:

|          |   |   |   |   |   |
|----------|---|---|---|---|---|
| <b>x</b> | 1 | 2 | 3 | 4 | 5 |
| <b>y</b> |   |   |   |   |   |

