

Today you will need:

1. A transformation packet (by the door)
2. Your notes (open to a new page)
3. Your book

There are RETAKE packets by the door as well for those who need one.

Lesson 1.3 - Introduction to Transformations

Key concepts:

What is a transformation?

Transforming using coordinate notation.

Pre-Image v. Image.

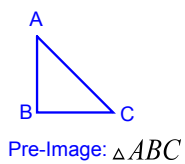
Rigid v. non-rigid motion.

What is a transformation?

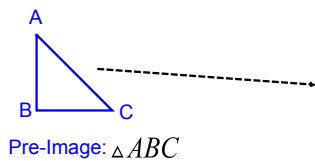
A transformation means changing one, some, or all of the following:

1. Size
2. Shape
3. Position

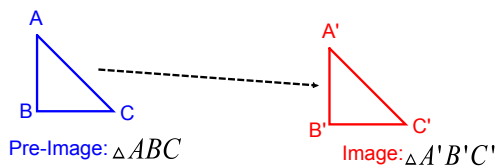
When transforming a shape, we say we are beginning with a "Pre-Image", and ending with an "Image".



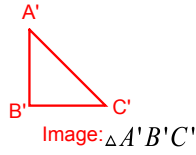
When transforming a shape, we say we are beginning with a "Pre-Image", and ending with an "Image".



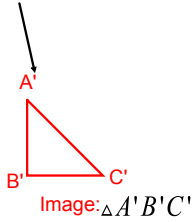
When transforming a shape, we say we are beginning with a "Pre-Image", and ending with an "Image".



When transforming a shape, we say we are beginning with a "Pre-Image", and ending with an "Image".



An "Image" is often written with prime notation:
 The image of point A is point A'

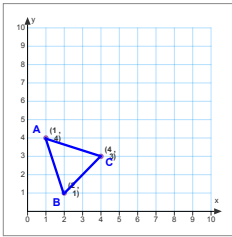


Some transformations do NOT change the size and shape of an object. These are called RIGID MOTIONS.

A RIGID MOTION is a transformation that preserves:

- 1. shape
- 2. size

Transformations on a coordinate plane can be done by using coordinate rules that tell us what we want to transform and how.

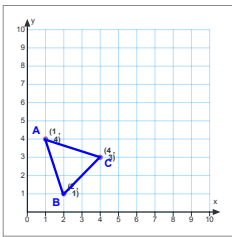


Transform pre-image ABC to image $A'B'C'$ using the following coordinate notation:

$(x,y) \rightarrow (x + 4, y + 2)$

- A(1,4).....A'()
- B(2,1).....B'()
- C(4,3).....C'()

Transformations on a coordinate plane can be done by using coordinate rules that tell us what we want to transform and how.

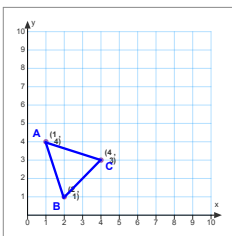


Transform pre-image ABC to image $A'B'C'$ using the following coordinate notation:

$(x,y) \rightarrow (x + 6, y - 1)$

- A(1,4).....A'()
- B(2,1).....B'()
- C(4,3).....C'()

Transformations on a coordinate plane can be done by using coordinate rules that tell us what we want to transform and how.

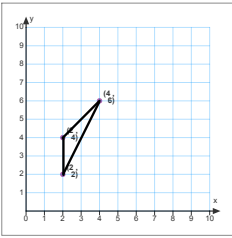


Transform pre-image ABC to image $A'B'C'$ using the following coordinate notation:

$(x,y) \rightarrow (2x, 2y)$

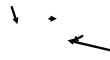
- A(1,4).....A'()
- B(2,1).....B'()
- C(4,3).....C'()

Transformations on a coordinate plane can be done by using coordinate rules that tell us what we want to transform and how.

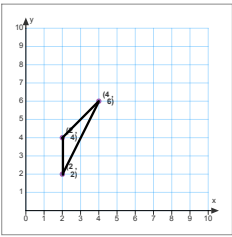


Transform pre-image ABC to image A'B'C' using the following coordinate notation:
 $(x,y) \rightarrow (1/2x, 1/2y)$

A(2,4).....A'()
 B(2,2).....B'()
 C(4,6).....C'()



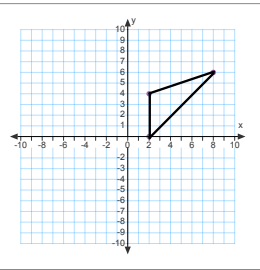
Transformations on a coordinate plane can be done by using coordinate rules that tell us what we want to transform and how.



Transform pre-image ABC to image A'B'C' using the following coordinate notation:
 $(x,y) \rightarrow (2x, y)$

A(2,4).....A'()
 B(2,2).....B'()
 C(4,6).....C'()

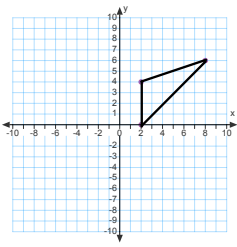
Transformations on a coordinate plane can be done by using coordinate rules that tell us what we want to transform and how.



Transform pre-image ABC to image A'B'C' using the following coordinate notation:
 $(x,y) \rightarrow (-x, y)$

A(2,4).....A'()
 B(2,0).....B'()
 C(8,6).....C'()

Transformations on a coordinate plane can be done by using coordinate rules that tell us what we want to transform and how.



Transform pre-image ABC to image $A'B'C'$ using the following coordinate notation:
 $(x,y) \rightarrow (-y, x)$

A(2,4).....A'()
 B(2,0).....B'()
 C(8,6).....C'()

Homework:
Pages 38 and 39, all problems

Lesson 2.1 - Translations

Key concepts:
Vector Notation versus Coordinate notation
