Geometry: Transformations

MCC1:

a. Describe three-dimensional figures formed by translations and rotations of plane figures through space.

Essential Questions:

- How can the coordinate plane help me understand properties of reflections, translations and rotations?

- What is the relationship between reflections, translations and rotations?

Transformations

A **transformation** is a way to move all the points on a figure.

Types of Transformations:

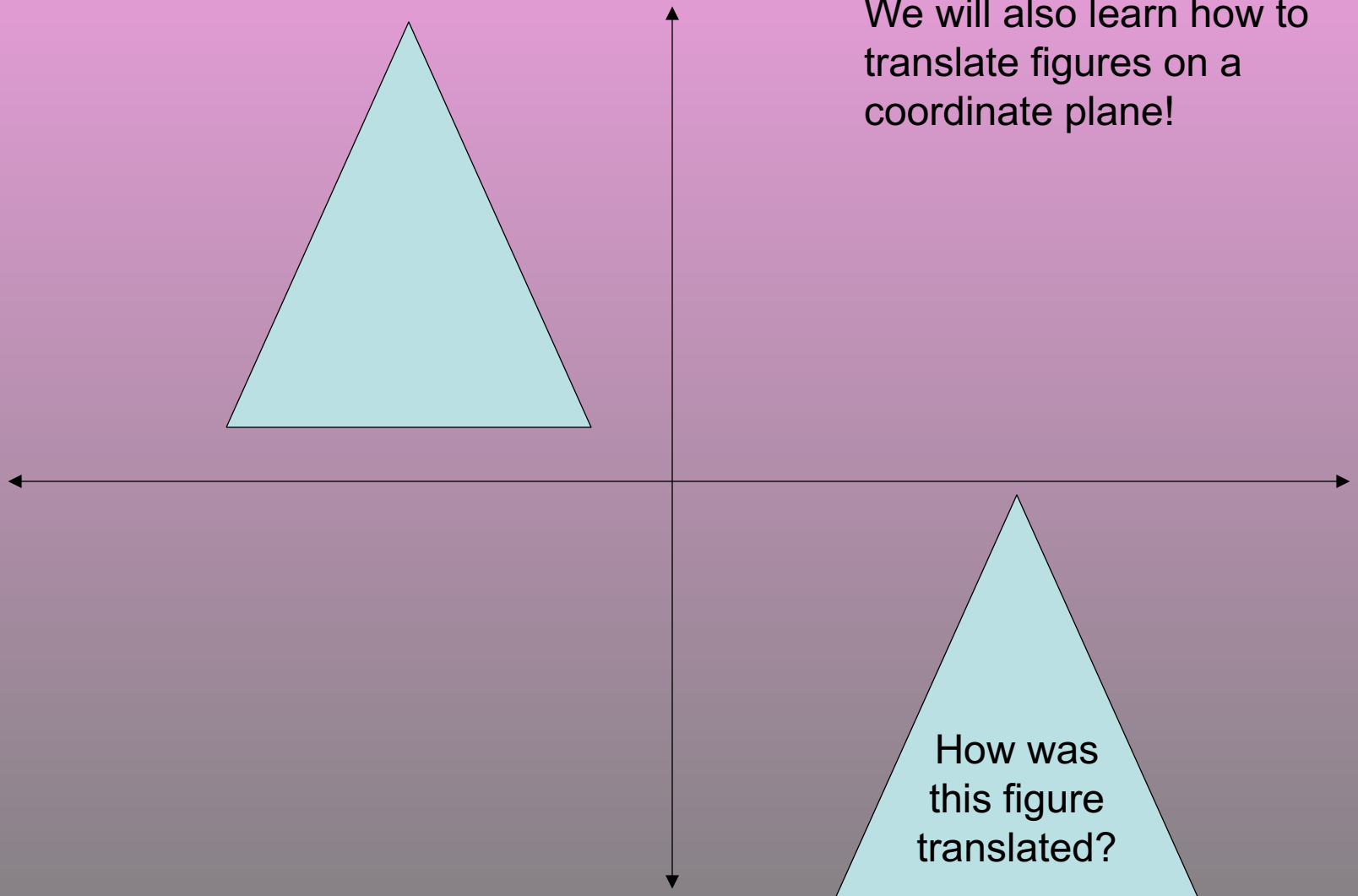
- Translations
- Reflections
- Rotations
- Dilations

Translation

A **translation** is a transformation that **SLIDES** a figure across a plane or through space. All points of the figure move the same distance in the same direction.

Translation

We will also learn how to translate figures on a coordinate plane!



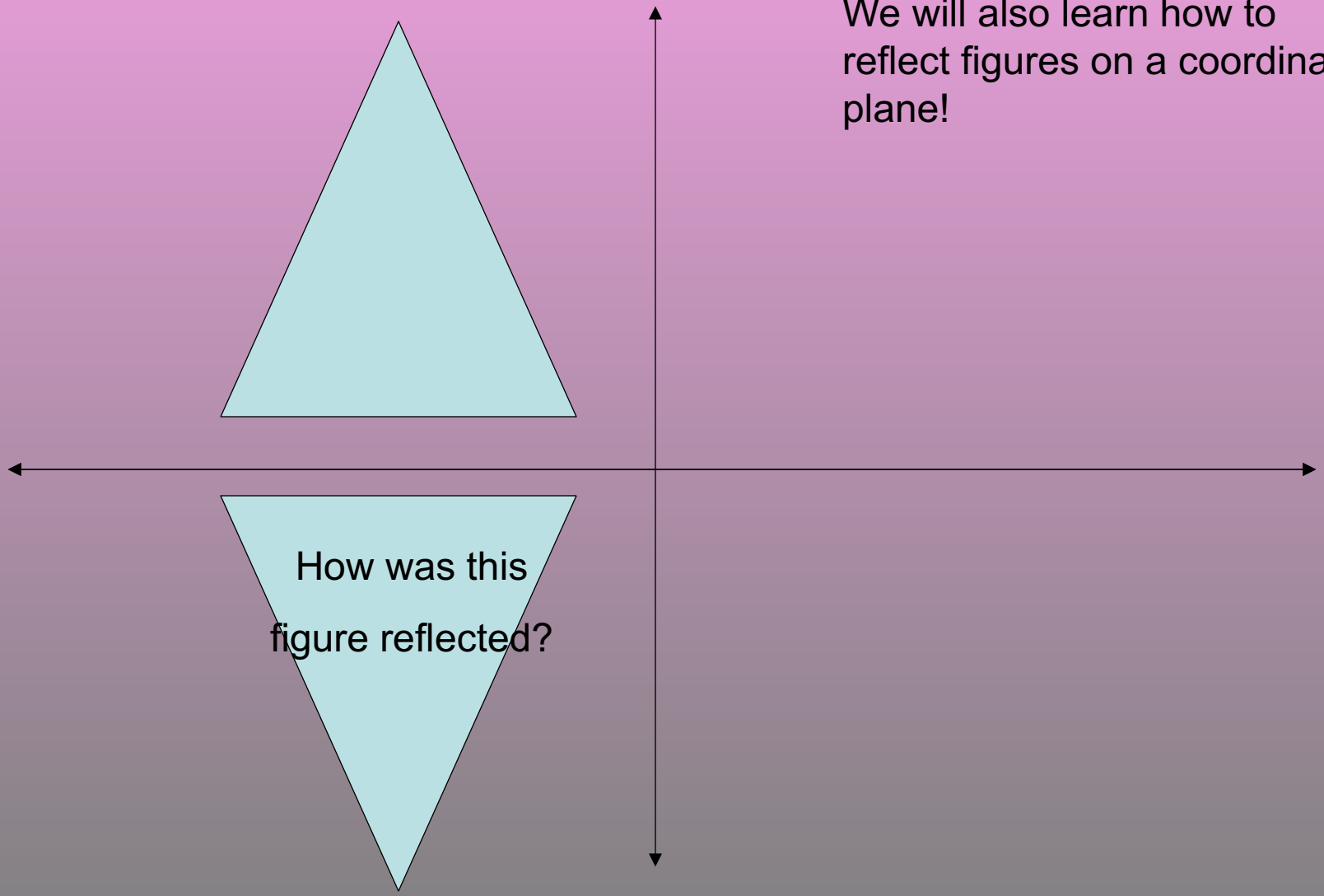
Translation

Reflection

A **reflection** is a transformation in which a figure is **FLIPPED** across a line. The line is called a line of reflection.

After a figure is reflected, it looks like a mirror image of itself.

Reflection



We will also learn how to reflect figures on a coordinate plane!

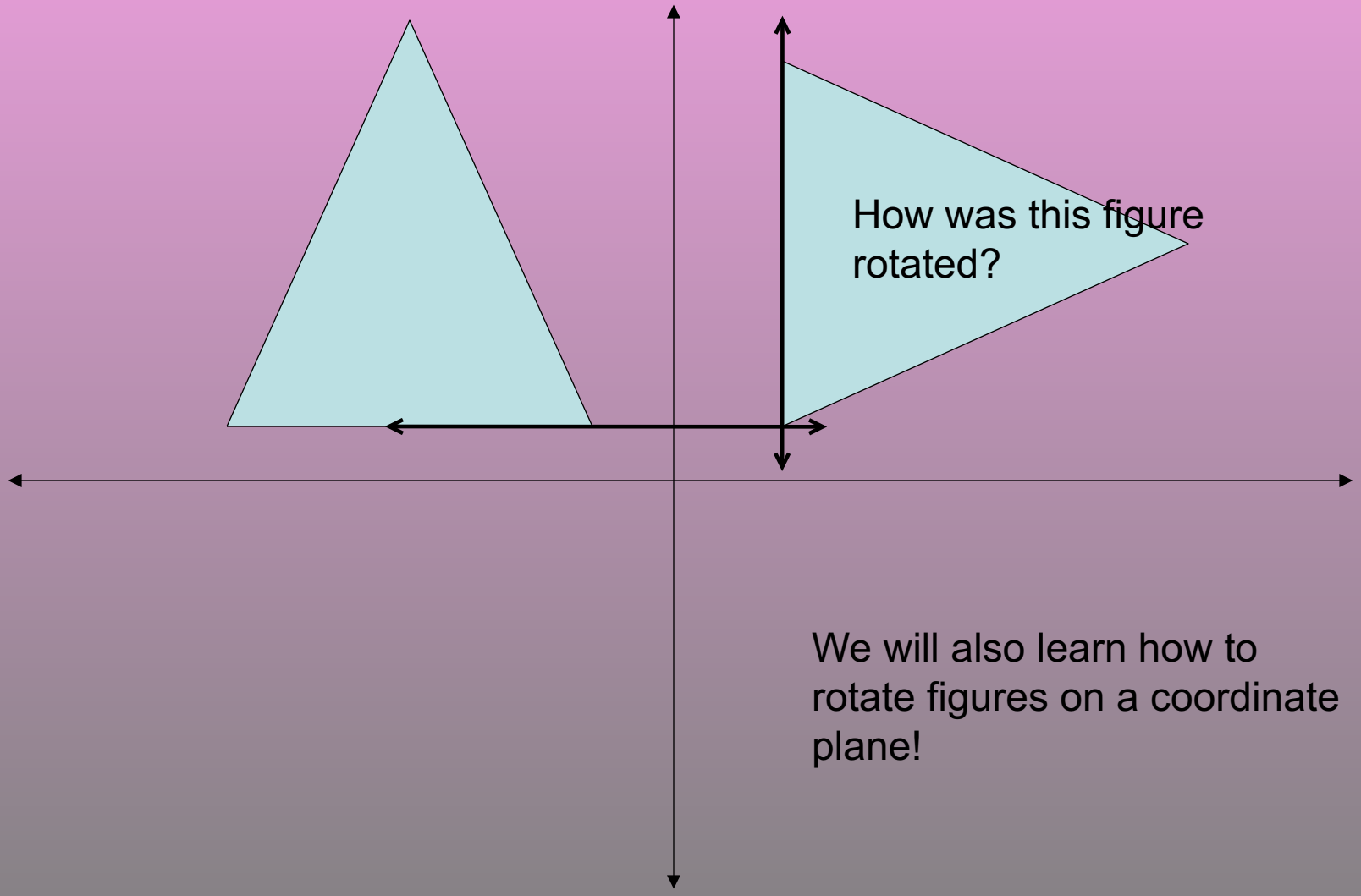
Reflection

Rotation

A **rotation** is a transformation that **TURNS** a figure about a point.

Rotation

Rotation



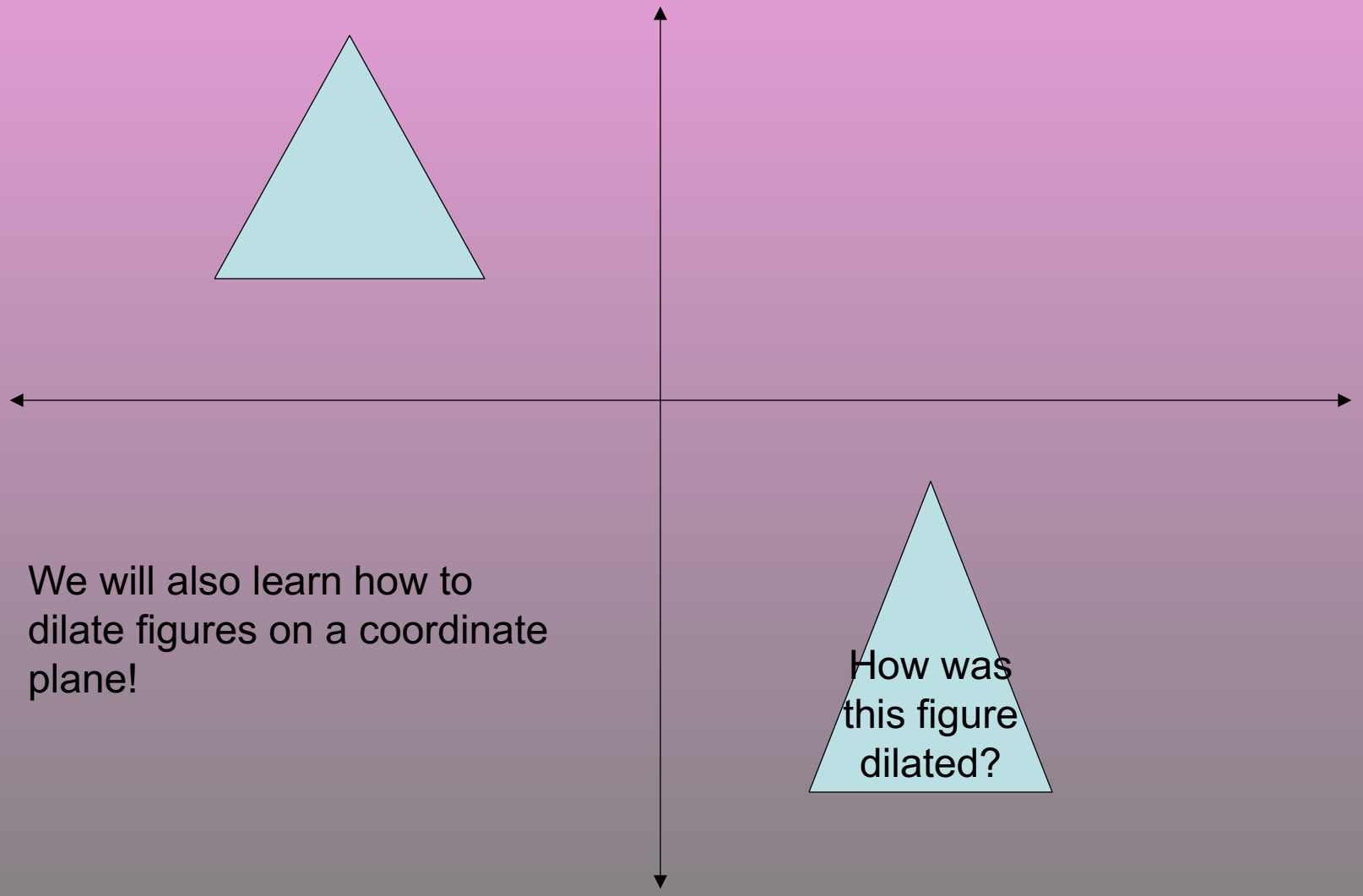
We will also learn how to rotate figures on a coordinate plane!

Dilation

A **dilation** is a transformation in which a figure **GROWS** or **SHRINKS**.

The size of the figure changes, but the shape doesn't!

Dilation



We will also learn how to dilate figures on a coordinate plane!

Dilation

Enjoy the Video!

You're Almost Done!

Click the link below to watch a Brain Pop video. You will need a sheet a paper so that you can answer the quiz questions at the end.

http://www.brainpop.com/

1. Log-in:
    1. Username: luellamid
    2. Password: school
2. Click on "Math"
3. Click on "Geometry and Measurement"
4. Click on "Transformation"
5. Give your quiz paper to Mrs. Gambrell or Ms. Adams when you are done.

Game Time!!!

Enjoy a round or two of Transtar!

http://www.mangahigh.com/en_us/games/transtar