Geometry CC – Mr. Valentino
Unit 6 Lesson 6: Constructing Dilations

Name: _Mr. Valentino_
Date: _____ Period: _____

Do Now:
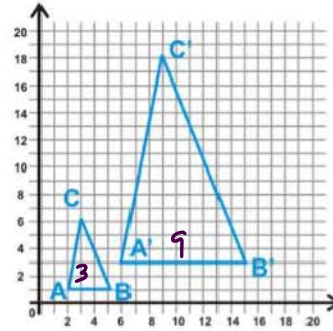1. What transformation is shown in the graph?

   DILATION

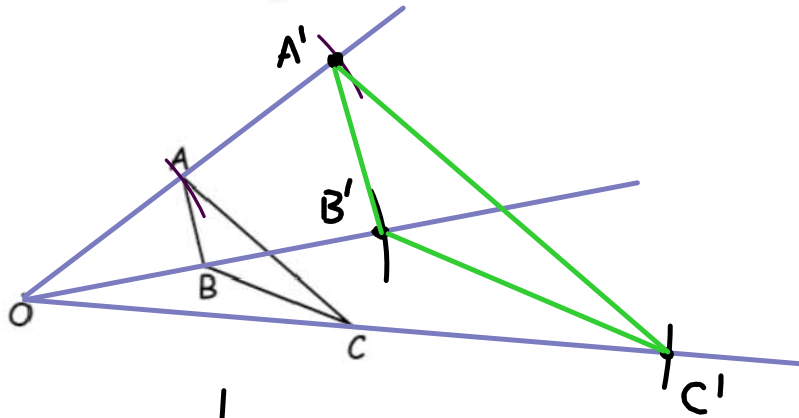2. How much is ΔABC enlarged by?
   Explain how you know.

   • enlarged by a scale
        factor of 3
   • K = 3

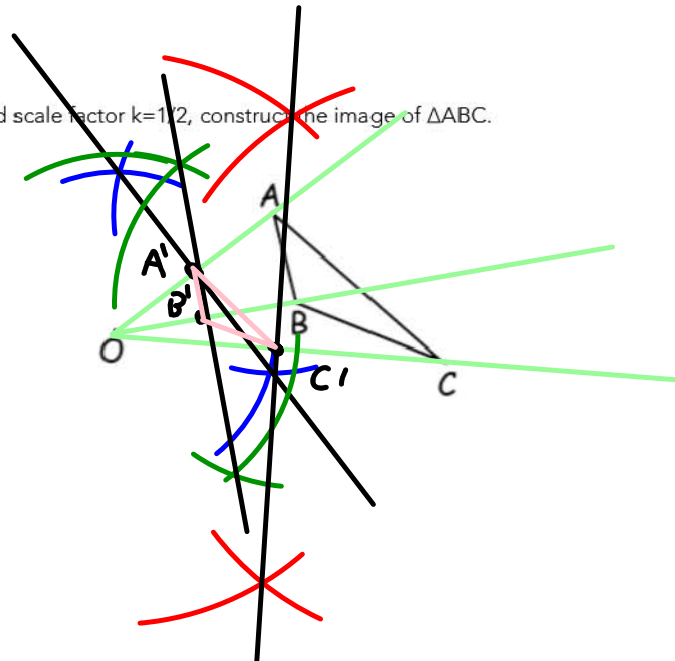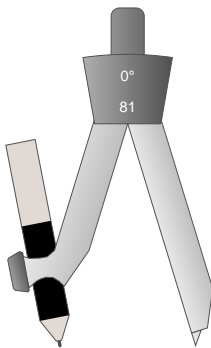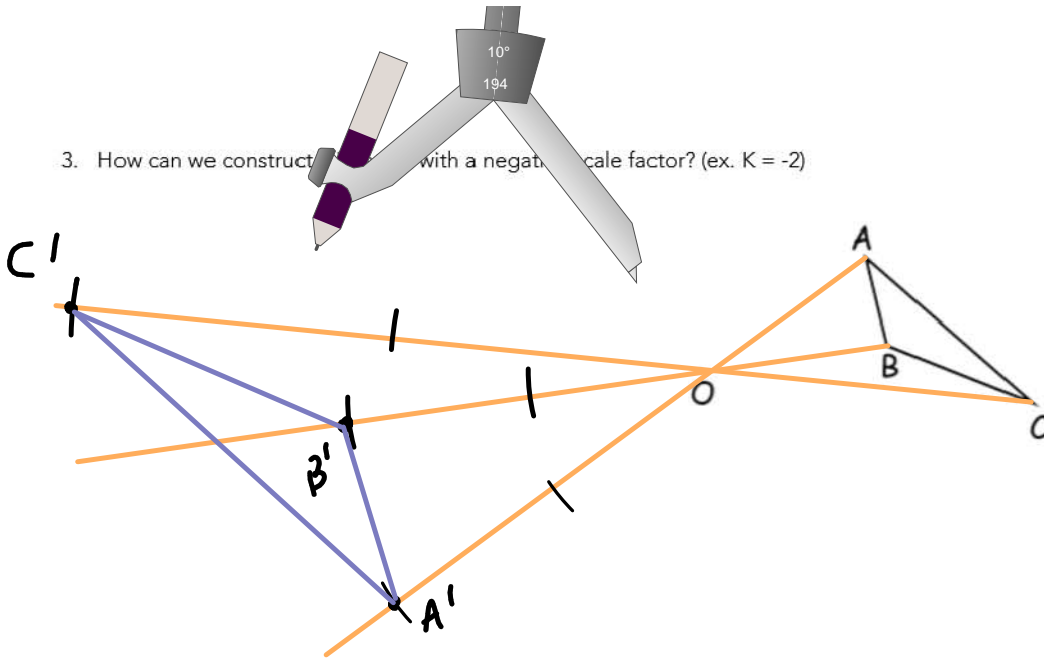
Dilating Images off the Coordinate Plane
1. Given center O and scale factor k=2, construct the image of ΔABC.

2. Given center O and scale factor k=1/2, construct the image of ΔABC.

0°
81

3. How can we construct ~~~~~ with a negat~~~~ scale factor? (ex. K = -2)

C'

A

B

O

C

B'

A'

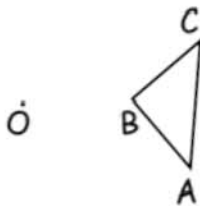Properties **Preserved** under a Dilation
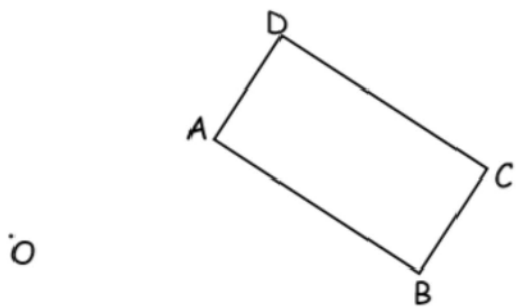1. angle measure
2. orientation
3. parallelism ✓

Not Preserved - distance ✗

- K>1, enlargement
- 0<K<1, reduction ($\frac{1}{2}$)
- K=1, congruence
- K<0, the image is placed on the opposite side of the center of dilation and $R_{180°}$ ----→ rotation

1. Construct △ABC after the transformation D_3. Label it A'B'C'.

C

O   B

A

2. Construct ABCD after the transformation $D_{1/2}$. Label it A'B'C'D'.

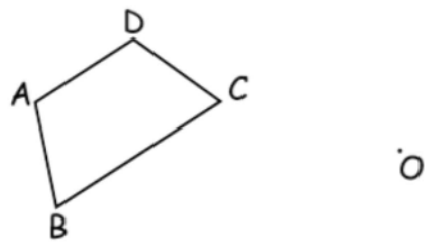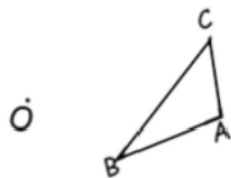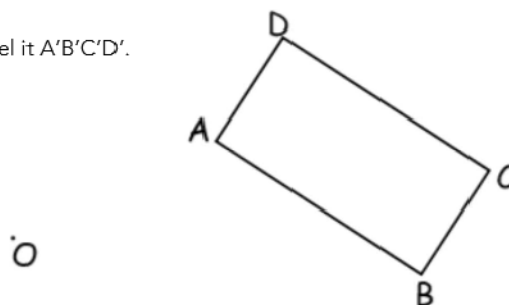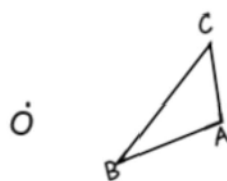3. Construct ABCD after the transformation D_2. Label it A'B'C'D'.

4. Construct $\triangle$ABC after the transformation D_4. Label it A'B'C'.

5. Construct ABCD after the transformation D_{-1}. Label it A'B'C'D'.

6. Construct △ABC after the transformation D_{-2}. Label it A'B'C'.

7. Construct △ABC after the transformation $D_{-1/2}$. Label it A'B'C'.