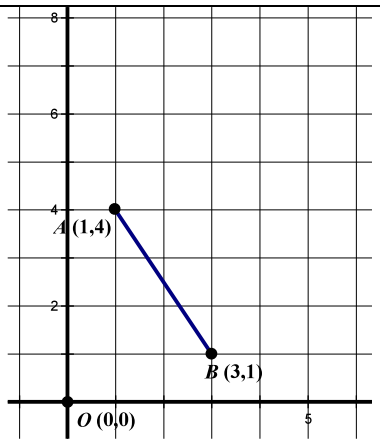
Geometry (G-SRT.1) Name: _____
Unit 7 Notes1: Applying Dilations Date: _____ Period: _____
I can identify the effect dilation has on segments and angles.

1. Investigating the length and slope properties of dilation. GRAPH #1

a) Calculate the length AB.
A(1, 4) B(3, 1)

b) Calculate the slope of $\overline{AB}$.
A(1, 4) B(3, 1)



c) Dilate $\overline{AB}$ about center O and scale factor of 2. (Graph it on graph #2)

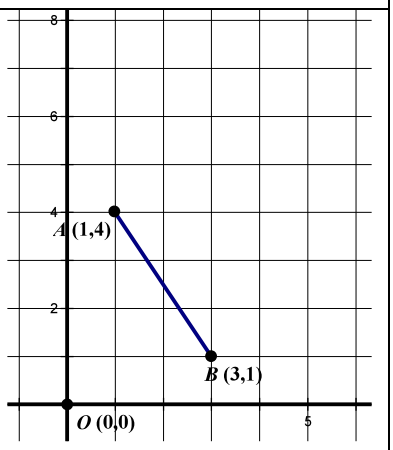
GRAPH #2

d) Calculate the length A'B'.

A'(_____ , _____) B'(_____ , _____)

e) Calculate the slope of $\overline{A'B'}$.

A'(_____ , _____) B'(_____ , _____)

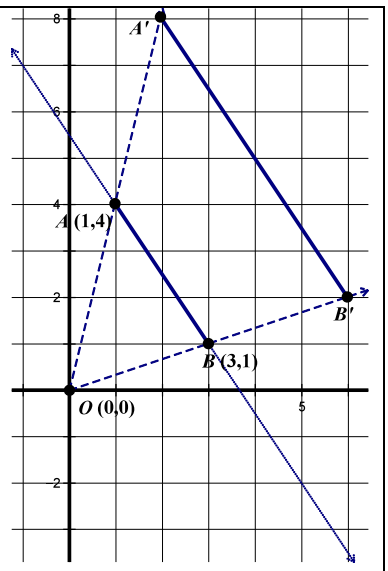


2. Investigating the angle properties of dilation.

GRAPH #3

a) What is true about <OAB and <OA'B?

b) What is true about <OBA and <OB'A?



c) How do we know this relationship is valid?

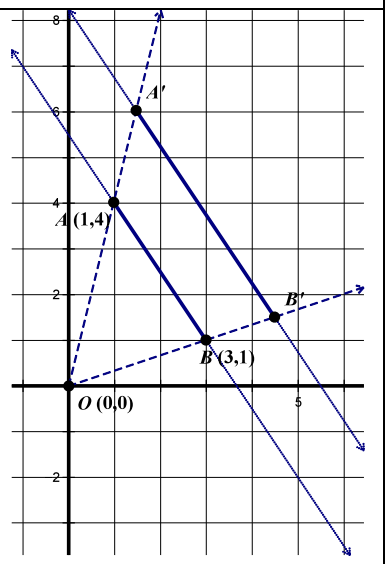
d) What is the scale factor for the dilation that has occurred?

Do these relationships change when we dilate by a different value?

GRAPH #4

e) What is true about <OAB and <OA'B?

f) What is true about <OBA and <OB'A?



g) What is the scale factor for the dilation that has occurred?

Summary: When a dilation occurs:

1) Distances/Lengths _____

2) Slopes _____

3) Angles _____