

**1.6.4 Practice: Modeling: Logo Design**

Practice

Geometry Sem 1

Name: _____

Points Possible: 20

Date: _____

Your Assignment: A Logo is Born**Recreating the Old Logos**

RidanCo is redesigning its logo. For years, it has had a star logo. At first it was a five-pointed star, but as the company grew, they changed the logo to a star with eight points. We will find out soon what the new logo will look like, using the Spider Tool.

Five-Pointed Star Logo

1. Use the interactive Spider Tool located on page 1 of this activity to recreate the five-pointed star logo. Start by asking the spider to move 50 units, rotate 144 degrees, and repeat the sequence until she returns to her starting point. Remember that you can use "Zoom out" or "Fit to window" if the spider leaves the viewing area. (To draw the logo with the feet of the star on the bottom, have her rotate 72 degrees, move 50 units, rotate 144 degrees, and then repeat the sequence until she returns to her starting point.) In the space below, sketch the five-pointed star logo you created with the Spider Tool. **(4 points)**

2. How many times did you repeat the sequence to create the five-pointed logo? **(1 point)**

3. If the spider rotates 144 degrees at each step, how many degrees does she rotate to create the star? **(1 point)**

Eight-Pointed Star Logo

4. Use the Spider Tool located on page 1 of this activity to recreate the eight-pointed logo. Start by asking the spider to move 50 units, rotate 135 degrees, and repeat the sequence until she returns to her starting point. Remember that you can use "Zoom out" or "Fit to window" if the spider leaves the viewing area. In the space below, sketch the eight-pointed logo you created with the Spider Tool. **(4 points)**

5. How many times did the spider have to repeat the steps? **(1 point)**

6. If the spider rotates 135 degrees at each step, how many degrees does she rotate in total to create the eight-pointed star? **(1 point)**

Creating the New Logo

RidanCo has decided to use a 12-pointed star that is 100 units tall as its new logo. Using the Spider Tool, create a drawing of the new logo below.

7. Use the Spider Tool located on page 1 of this activity to draw a 12-pointed star for the new logo. (Hint: If the spider rotates 360 degrees – or 720 degrees or 1080 degrees – she will be facing in the same direction in which she started. When the spider is done drawing, you want her to be facing in the same direction in which she started. She'll be making 12 rotations, all the same size, so each rotation must be some multiple of $360/12 = 30$ degrees.) Experiment with the Spider Tool to find the correct number of degrees to create a 12-pointed star, and then sketch your logo in the space below. **(4 points)**

8. How many degrees did the spider have to rotate to create a 12-pointed star? **(2 points)**

9. Describe some of the other figures you discovered while trying to create the 12-pointed star. **(2 points)**

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