

Unit 1 Lesson 14: Defining Rotations

1 Math Talk: Comparing Angles (Warm up)

Student Task Statement

For each figure, which pair of angles appears congruent? How could you check?

Figure 1

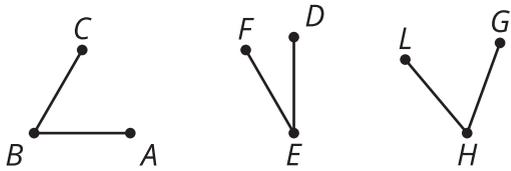


Figure 2

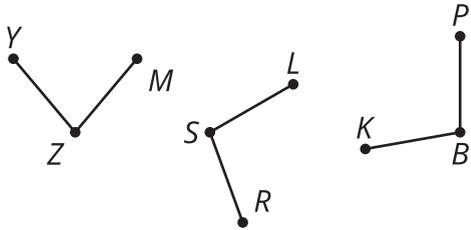


Figure 3

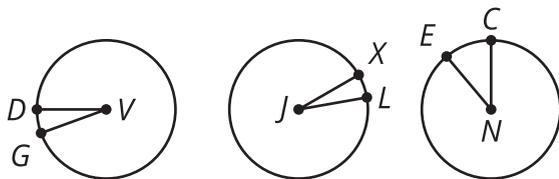
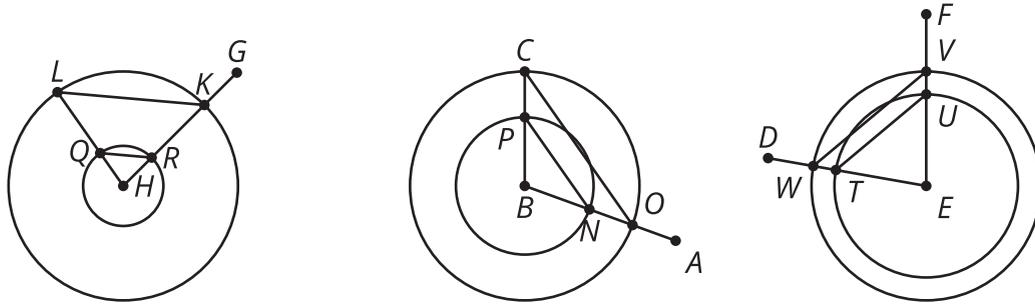


Figure 4



2 Info Gap: What's the Point: Rotations

Student Task Statement

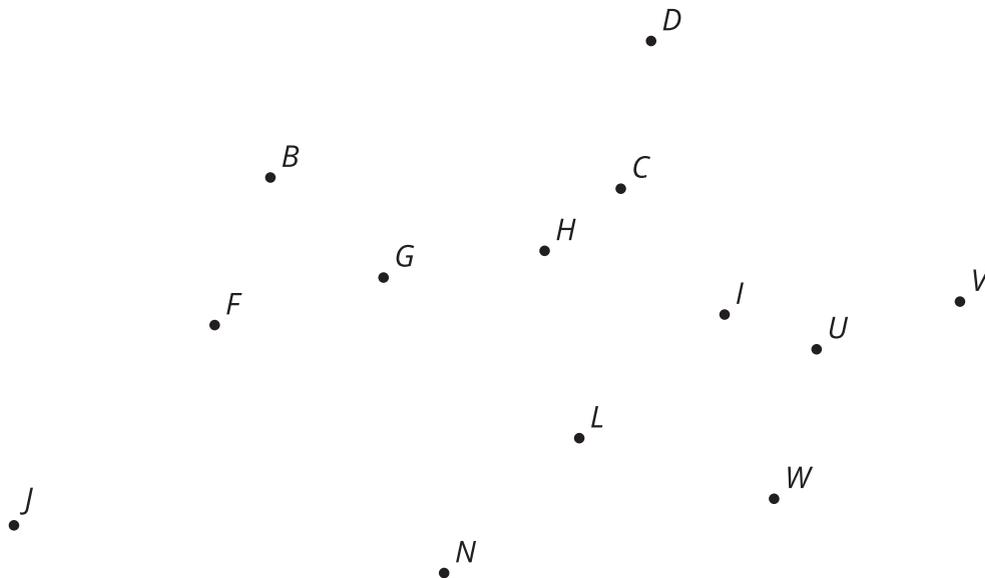
Your teacher will give you either a problem card or a data card. Do not show or read your card to your partner.

If your teacher gives you the data card:

1. Silently read the information on your card.
2. Ask your partner "What specific information do you need?" and wait for your partner to ask for information. Only give information that is on your card. (Do not figure out anything for your partner!)
3. Before telling your partner the information, ask "Why do you need to know (that piece of information)?"
4. Read the problem card, and solve the problem independently.
5. Share the data card, and discuss your reasoning.

If your teacher gives you the problem card:

1. Silently read your card and think about what information you need to answer the question.
2. Ask your partner for the specific information that you need.
3. Explain to your partner how you are using the information to solve the problem.
4. When you have enough information, share the problem card with your partner, and solve the problem independently.
5. Read the data card, and discuss your reasoning.



3 Turning into Triangles

Student Task Statement

1. Draw a segment. Label the endpoints A and B .
 - a. Rotate segment AB clockwise around center B by 90 degrees. Label the new endpoint A' .
 - b. Connect A to A' and lightly shade in the resulting triangle.
 - c. What kind of triangle did you draw? What other properties do you notice in the figure? Explain your reasoning.

2. Draw a segment. Label the endpoints C and D .
 - a. Rotate segment CD counterclockwise around center D by 30 degrees. Label the new endpoint C' .
 - b. Rotate segment $C'D$ counterclockwise around center D by 30 degrees. Label the new endpoint C'' .
 - c. Connect C to C'' and lightly shade in the resulting triangle.
 - d. What kind of triangle did you draw? What other properties do you notice in the figure? Explain your reasoning.

Images for Activity Synthesis

Rotate P counterclockwise by a° using center C .

