1. Refer to the diagram, where $VVW \parallel YZ$.
   a. Write a similarity statement.
   b. Write a paragraph proof for your result.

2. In the diagram, $ABCD$ is a parallelogram.
   a. Name three triangles that are similar to $\triangle BEF$.
      (For each triangle, give the vertices in the correct, corresponding order.)
   b. Write a paragraph proof for your result.

In Exercises 3–8, refer to the diagram. Find the coordinates of the missing point so that the similarity statement is true. (There may be more than one correct answer.)

3. Given $\triangle PQR \sim \triangle STU$, find the coordinates of $U$.
4. Given $\triangle PQR \sim \triangle VST$, find the coordinates of $V$.
5. Given $\triangle PQR \sim \triangle SWT$, find the coordinates of $W$.
6. Given $\triangle PQR \sim \triangle TSX$, find the coordinates of $X$.
7. Given $\triangle PQR \sim \triangle YTS$, find the coordinates of $Y$.
8. Given $\triangle PQR \sim \triangle TZS$, find the coordinates of $Z$.

9. Determine if the following conjecture is true or false. If it is true, write a paragraph proof; if it is false, sketch or describe a counterexample.
   If the corresponding angles of quadrilaterals $ABCD$ and $EFGH$ are congruent, then $ABCD \sim EFGH$.

10. To estimate the radius of the sun, a student punches a tiny hole in a piece of paper and allows the sun to shine through the hole, forming an image on a screen 200 cm away. If the image has a radius of 0.6 cm and the student knows that the sun is 150,000,000 km away, what is the student’s estimate of the radius of the sun? (Illustration is not to scale.)