Lesson Maker Pro

Draw and Find Geometry

Create geometric objects, then identify them within a labeled figure.

4.6 Geometry and measurement. The student applies mathematical process standards to analyze geometric attributes in order to develop generalizations about their properties. The student is expected to: identify points, lines, line segments, rays, angles, and perpendicular and parallel lines; identify and draw one or more lines of symmetry, if they exist, for a two-dimensional figure; apply knowledge of right angles to identify acute, right, and obtuse triangles; and classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines or the presence or absence of angles of a specified size.

NAME _____ **DATE** _____

Make labeled drawings

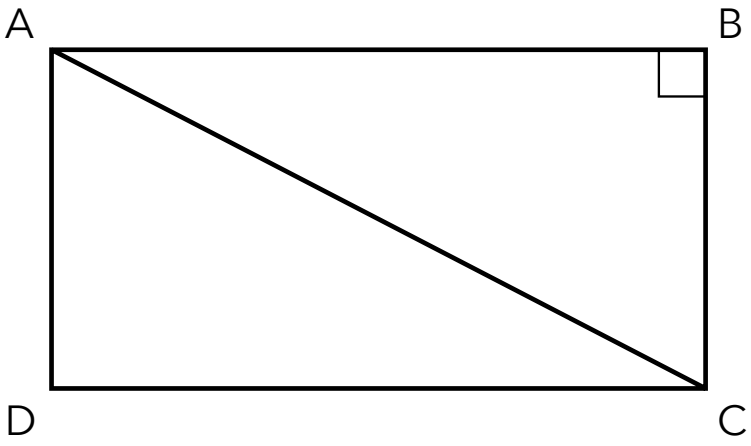
Use a straightedge. Label all requested points. A line extends both ways, a ray one way, and a segment has two endpoints.

Draw	Drawing and labels
Point P	
Line through A and B, with arrows both ways	
Segment CD, with two endpoints	
Ray EF, starting at E	

Draw two parallel lines. Then draw two perpendicular lines and mark the right angle. Draw two intersecting lines that are not perpendicular.

Read a two-dimensional figure

In rectangle ABCD, name a vertex, two segments that meet, one pair of parallel sides and one pair of perpendicular sides. Use the letters to identify each.



ABCD is a rectangle

At A, classify ∠DAB, ∠BAC and the angle between ray AB and the opposite ray to AC as right, acute or obtuse. Then draw one new angle of each kind and label its vertex.

Draw all lines of symmetry of the rectangle. Is its diagonal AC a symmetry line? Explain. For triangle ABC, identify its angle type and explain using the rectangle's corner.

Teacher Key

Page 1: point P; line AB with two arrows; segment CD with two endpoints; ray EF with endpoint E extending through F. Parallel lines do not meet in a plane; perpendicular lines meet at 90°. A non-right crossing is intersecting but not perpendicular. Require actual labeled drawings.

Page 2: vertices A,B,C,D; meeting segments such as AB/BC; parallel AB/CD and AD/BC; perpendicular adjacent sides. ∠DAB is right; ∠BAC is acute; AB with the opposite ray to AC is obtuse. A line extends beyond both A and B; ray DA starts at D and passes through A; rectangle sides are finite segments.

Where asked: this nonsquare rectangle has exactly two symmetry lines through opposite side midpoints. AC is not a symmetry line because it would not map the long and short sides onto equal-length sides. Triangle ABC is right at B. Accept correctly labeled alternative drawings; do not judge a line only by page orientation.