Lesson 6: Drawing Geometric Shapes

Problem Set

Use a ruler, protractor, and compass to complete the following problems.

1. Draw a segment that is in length and perpendicular to segment , which is in length.
2. Draw supplementary angles so that one angle is . Label each angle with its measurement.
3. Draw so that has a measurement of .
4. Draw a segment that is in length. Draw a circle with center and radius . Draw a second circle with diameter .
5. Draw an isosceles . Begin by drawing with a measurement of . Use the rays of as the equal legs of the triangle. Choose a length of your choice for the legs, and use your compass to mark off each leg. Label each marked point with and . Label all angle measurements.
6. Draw an isosceles . Begin by drawing a horizontal segment that is in length. Use your protractor to draw and so that the measurements of both angles are . If the non-horizontal rays of and do not already cross, extend each ray until the two rays intersect. Label the point of intersection . Label all side and angle measurements.
7. Draw a segment that is in length. Draw a circle with center and a circle with center so that the circles are not the same size, but do intersect in two distinct locations. Label one of these intersections . Join to and to to form .
8. Draw an isosceles trapezoid with two equal base angles, and , that each measures . Use your compass to create the two equal sides of the trapezoid. Leave arc marks as evidence of the use of your compass. Label all angle measurements. Explain how you constructed the trapezoid.