Drawing Geometric Shapes

1. Draw a square with side length equal to cm. Label side and angle measurements.

2. Draw a segment cm in length. Draw a circle whose diameter is segment .

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

1. Draw a segment that is cm in length, perpendicular to segment , cm in length.

2. Draw supplementary angles so that one angle is . Label each angle with its measurement.

3. Draw triangle so that has a measurement of .

4. Draw a segment that is cm in length. Draw a circle with center and radius . Draw a circle with diameter .

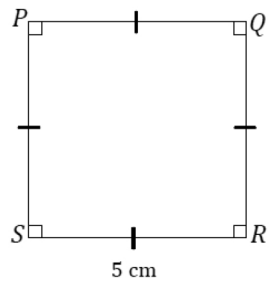
5. Draw an isosceles triangle . Begin by drawing with a measurement of . Use the rays of as the equal legs of the triangle. Choose a length of your choice for the legs and use your compass to mark off each leg. Label each marked point with and . Label all angle measurements.

6. Draw an isosceles triangle . Begin by drawing a horizontal segment that is cm 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.

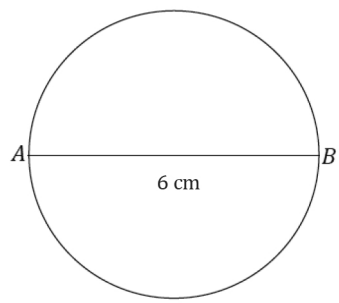
7. Draw a segment that is cm in length. Draw a circle with center and a circle with center so that the circles are not the same size, but do intersect in two distinct locations. Label one of these intersections . Join to and to to form .

8. Draw an isosceles trapezoid with two equal base angles and that each measure . 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.

1. Draw a square with side length equal to cm. Label side and angle measurements.



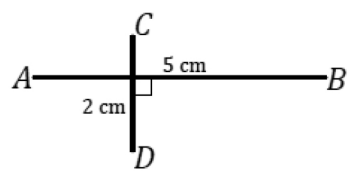
2. Draw a segment , cm in length. Draw a circle whose diameter is segment .



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

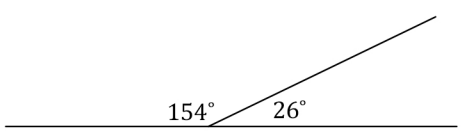
1. Draw a segment that is cm in length, perpendicular to segment , cm in length.

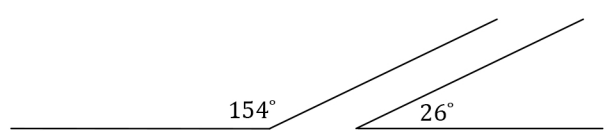
One possible solution:



2. Draw supplementary angles so that one angle is . Label each angle with its measurement.

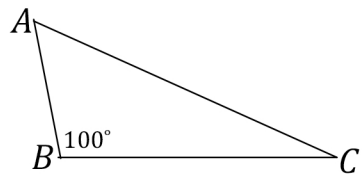
Possible solutions:





3. Draw triangle so that has a measurement of .

One possible solution:



4. Draw a segment that is cm in length. Draw a circle with center and radius . Draw a circle with diameter .

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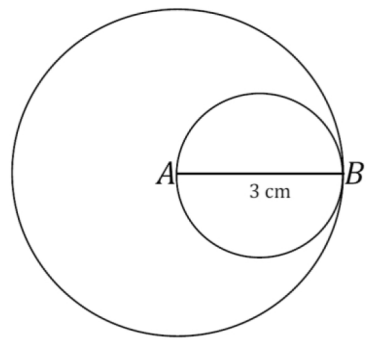

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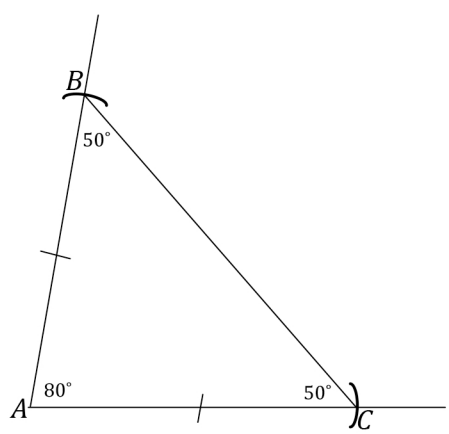

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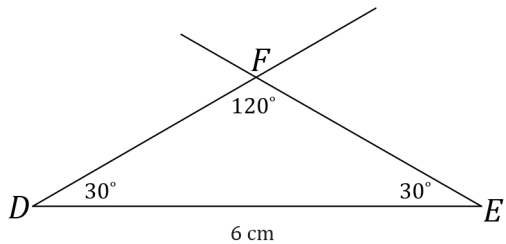

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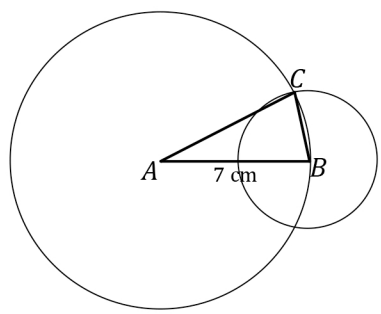

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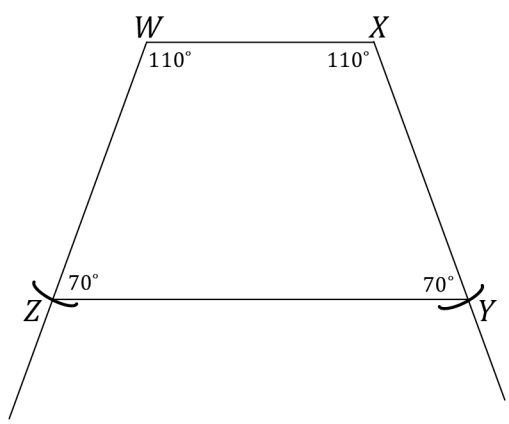

Draw segment . Use a protractor and to draw at a measurement of ; do the same to draw . When drawing rays and , length is not specified, so students should have rays long enough so that they can use a compass to mark off lengths that are the same along each ray in the next step. Place the point of the compass at and adjust it to a desired width and mark an arc so that it crosses ray . Label the intersection as . Do the same from along ray and mark the intersection as .