

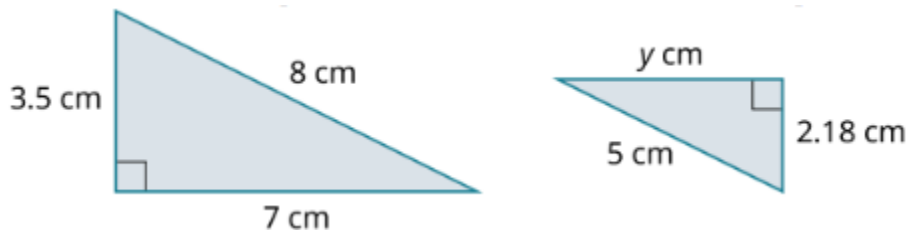
Mathematics for College Liberal Arts  
Unit 10 Project  
Geometry

**Instructions:** Answer **ALL** questions. You **MUST** show all calculations and/or explanations to justify your answers. Upload the completed project as a Word or PDF file.

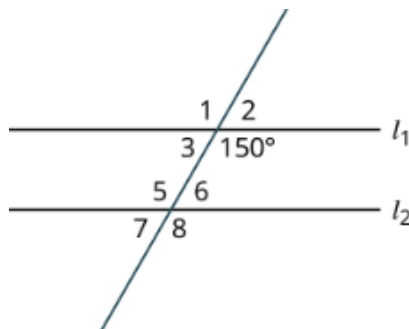
1. The two triangles shown are congruent by what theorem?



2. Determine the scaling factor between these two similar triangles.

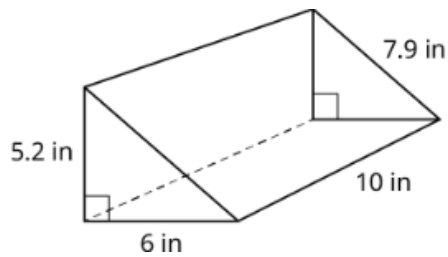


3. Find the measurement of an interior angle of a regular heptagon.
4. Find the sum of the interior angles of a regular pentagon.
5. Calculate the perimeter of a regular octagon with a side length of 5 cm.
6. Find the circumference of the circle with a radius of 3.5 cm.
7. Given that  $l_1$  and  $l_2$  are parallel lines, solve the angle measurements for all the angles in the given figure.

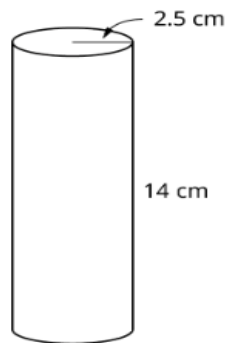


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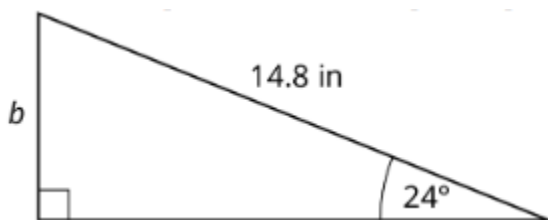
8. Find the surface area of the triangular prism shown.



9. Find the volume of the right cylinder in the given figure.



10. Find the length of side  $b$  in the given figure.



11. Find the measure of  $\theta$  in the given figure.

