

11-96. Solve for the variables in each of the diagrams below. Assume point $C$ is the center of the circle in part (b).
a.

b.

c.


11-97. In part (c) of problem 11-96, you used the relationship between the segment lengths formed by intersecting chords to find a missing length. But how are the arc measures of two random intersecting chords related? Examine the diagram at right.
a. Solve for $a, b$, and $c$ using what you know about
 inscribed angles and the sum of the angles of a triangle.
b. Compare the result for $c$ with $88^{\circ}$ and $72^{\circ}$. Is there a relationship?

11-98. Perhaps you think the Earth is big? Consider the sun!
a. Assume that the radius of the Earth 4000 miles. The sun is approximately 109 times as wide. Find the sun's radius.
b. The distance between the Earth and the moon is 238,900 miles. Compare this distance with the radius of the sun you found in part (a).

c. If the sun were hollow, how many Earths would fill the inside of it?

11-99. Write the equation for the graph at right.

11-100. On your paper, draw a diagram of a square-based pyramid. If the base has side length 6 units and the height of the pyramid is 10 units, find the total surface area. Show all your work.


11-101. Multiple Choice: Which of the following cannot be the measure of an exterior angle of a regular polygon?
a. $18^{\circ}$
b. $24^{\circ}$
c. $28^{\circ}$
d. $40^{\circ}$

11-102. Solve for the variables in each of the diagrams below. Assume that point $C$ is the center of the circle in part (b).

b.



11-103. Which has greater volume: a cylinder with radius 38 units and height 71 units or a rectangular prism with dimensions 34,84 , and 99 units? Show all work and support your reasoning.

11-104. Copy the diagram at right onto your paper. Use the process from problem 11-97 to find the measure of $x$. Show all work.


