

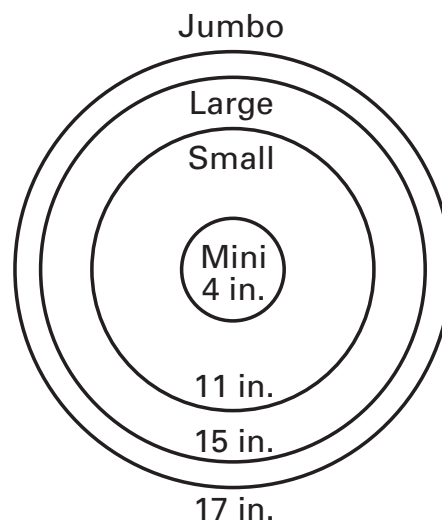
Application Lesson Opener

For use with pages 683–689

YOU WILL NEED: • graph paper • ruler

An Italian restaurant offers pizzas in the four sizes shown. The table gives the number of equal pieces each pizza is cut into when it is served.

<i>Diameter of pizza (in inches)</i>	<i>Number of equal pieces</i>
4	4
11	6
15	8
17	12



1. Draw each size pizza on graph paper, with 1 unit = 1 inch. Show cut lines for all the pieces of pizza.
2. The distance around the edge of a pizza is its *circumference*. The formula for the circumference C of a circle is $C = \pi d$, where d is the diameter of the circle. Use a calculator to find the length of the outer crust for one piece of pizza of each size. Give your answer to the nearest sixteenth of an inch. After you complete the table, examine these lengths on your drawings.

<i>Diameter of pizza (in inches)</i>	<i>Length of outer crust of one piece (in sixteenths of an inch)</i>
4	
11	
15	
17	

3. Compare lengths of outer crusts by drawing a segment of that length for each. Explain why, in terms of outer crust length, a larger pizza is cut into more pieces of pizza than a smaller pizza.