

Directions: Draw each figure, then solve, showing all work.

1. The radius of circle is 3 miles. What is the area of a sector bound by a  $175^\circ$  arc?
  
  
  
  
  
  
  
  
  
  
2. The diameter of a circle is 6 feet. What is the area of a sector bound by a  $20^\circ$  arc?
  
  
  
  
  
  
  
  
  
  
3. The diameter of a circle is 15 meters. What is a length of the arc bound by a  $42^\circ$  central angle?
  
  
  
  
  
  
  
  
  
  
4. A circle has a circumference of  $55\pi$ . What is the length of the arc created by a  $124^\circ$  central angle?
  
  
  
  
  
  
  
  
  
  
5. A circle has a diameter of 25 feet and an  $85^\circ$  arc. What is the area of the sector not bound by this arc?
  
  
  
  
  
  
  
  
  
  
6. A circle has an area of 136 square units. What is the area of a sector bound by a  $143^\circ$  arc?
  
  
  
  
  
  
  
  
  
  
7. For each problem above, find the geometric probability that a dart would land in the spaces bound by the given arc/angle.