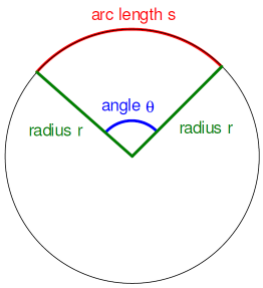
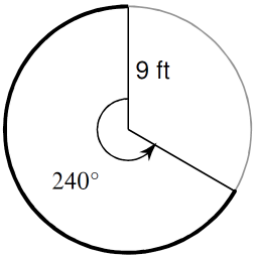
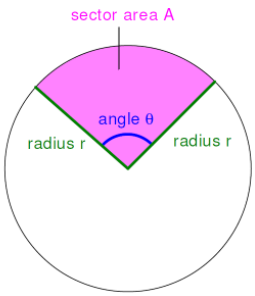
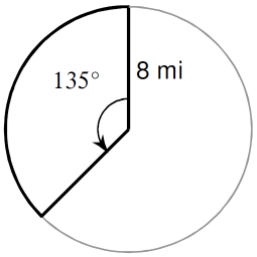
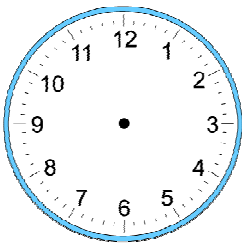
8.1 (Part II) – Applications with Angle Measure

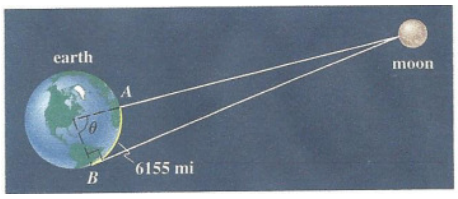
Arc Length → $s = r \cdot \theta$ (in radians)		Sector Area → $A = \frac{1}{2} \cdot r^2 \cdot \theta$ (in radians)	
	**Ex 1a: Find the arc length** 		**Ex 1b: Find the sector area** 

Example 2: Using the appropriate formula(s), find what is asked. Round to tenth place.

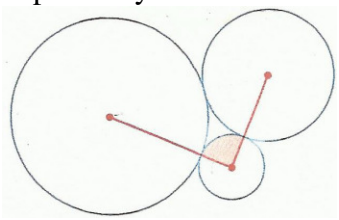
a.) What is the distance between the tips of the minute and the hour hand of a clock at 10:08 when the minute hand is 6 in long and the hour hand is 4 in long?



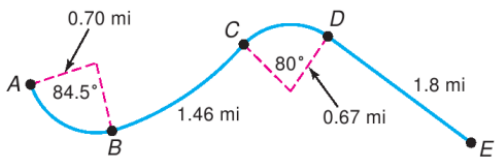
b.) What is the distance between point A and the moon given the radius of the earth 3,960 miles?



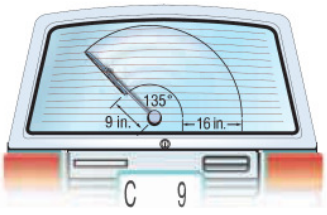
c.) Three circles with radii of 2, 3, and 5 inches respectively. What is the area of the shaded region?



d.) The figure below shows a stretch of roadway where the curves are arcs of circles. What is the length of this stretch of road?



e.) What is the area swept by the rear windshield wiper?



f.) What is the area of the shaded region?