

<u>Formulas:</u>	<u>arc length</u>	<u>area</u>
Convert degree-minute-seconds to decimal $D^\circ + (M'/60) + (S''/3600)$	$D^\circ \quad s = \frac{\theta}{360} \cdot 2\pi \cdot r$	$K = \frac{\theta}{360} \cdot \pi \cdot r^2$
Convert decimal-degree to minutes-seconds $D^\circ + \text{decimal}(60) + \text{repeat for seconds}$		
Convert degrees to radians $D^\circ \cdot \pi / 180$	Rad $s = r\theta$	$K = \frac{1}{2}r^2\theta \quad \text{or} \quad K = \frac{1}{2}rs$
Convert radians to degrees $R \cdot 180 / \pi$		

For all worksheet problems, if necessary, round to nearest hundredth.
Change each degree measurements into ***decimal*** form.

1) $435^\circ 36' =$ _____ 2) $-19^\circ 48' 22'' =$ _____

Change each degree measurement into ***minute-second*** form.

3) $200.015^\circ =$ _____ 4) $683.32^\circ =$ _____

Convert each degree measurement to ***radians***.

5) $-325^\circ =$ _____ 6) $92^\circ 14' =$ _____

Convert each degree measurement to ***radians***. Leave answers in ***terms of π*** .

7) $135^\circ =$ _____ 8) $-240^\circ =$ _____

Convert each radian measurement to degrees.

9) $1.85 =$ _____ 10) $4.1 =$ _____

11) $-\frac{\pi}{9} =$ _____ 12) $\frac{11\pi}{6} =$ _____

Name one positive and one negative coterminal angle for each angle given.

13) 13°	14) -600.75°	15) $252^\circ 11'$
(+) _____	(+) _____	(+) _____
(-) _____	(-) _____	(-) _____

Find the missing measurement or measurements for each circle sector described.

16) radius = 8cm
 central angle = .75 radians
 Find the arc length and area

17) arc length = 63mm
 central angle = 4.2 radians
 Find the radius and area

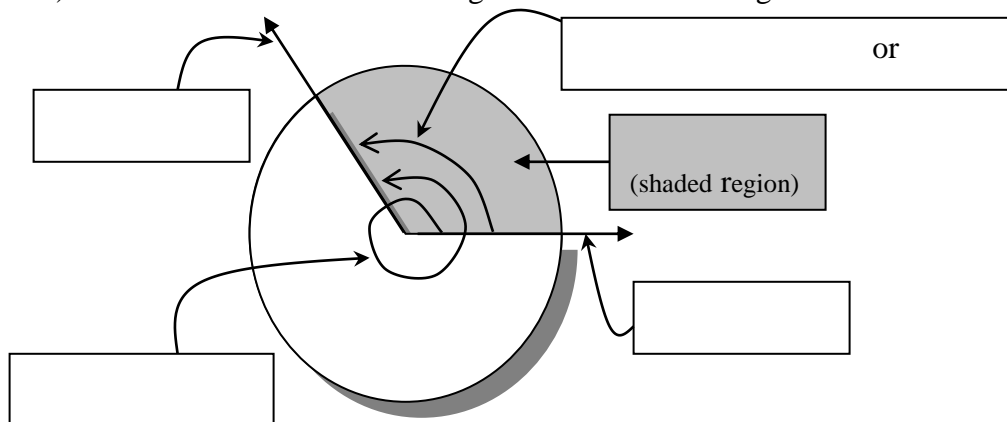
18) area = 15.2cm^2
 central angle = 1.9 radians
 Find the radius and arc length

19) radius = 28ft
 central angle = 270°
 Find the arc length

20) radius = 11.5in
 central angle = 35°
 Find the area

21) area = $22.5\pi\text{cm}^2$
 central angle = 225°
 Find the arc length

22) Use the word bank to the right to label the drawing below.



WORD BANK

initial ray
 terminal ray
 central angle
 θ
 sector
 coterminal angle