Reference Angles

135°

-40°
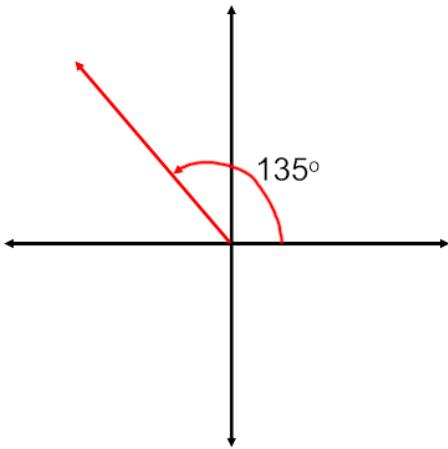
Arc length

Circumference of a Circle

S
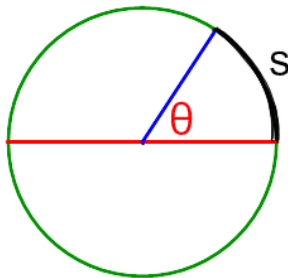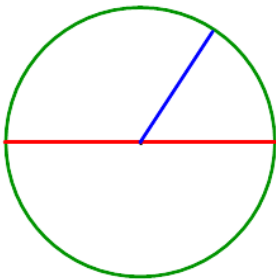
radius
central angle in radians
$s = r\theta$
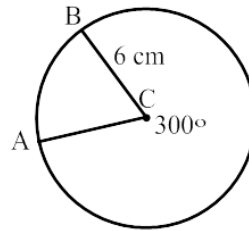arc length

$C = \pi d$ or $C = 2\pi r$

Find the arc length with the given information.

A circle with a diameter of 12 in. and a central angle of $\pi/12$.

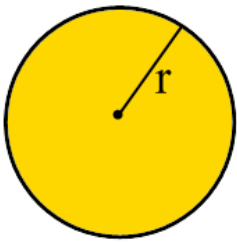A circle with a radius of 8 cm and a central angle of 140°.
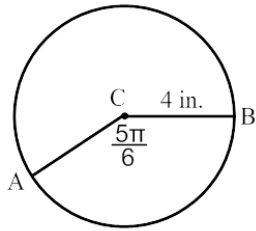
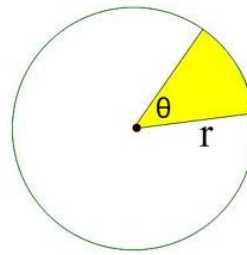Find the length of AB

Find the length of AB

Area of a sector

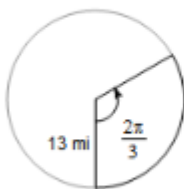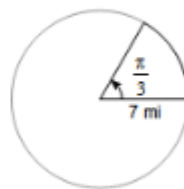Area of a Circle:

Area of circle $= \pi r^2$

Area of a Sector:

Area of sector $= \dfrac{1}{2}r^2\theta$

central angle in radians

Find the area of the given sector.

1)

13 mi $\dfrac{2\pi}{3}$
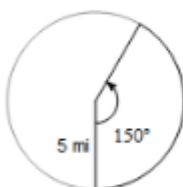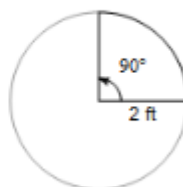
2)

$\dfrac{\pi}{3}$
7 mi

5)

5 mi   150°

6)

90°
2 ft

9) $r = 13$ yd, $\theta = \dfrac{\pi}{6}$
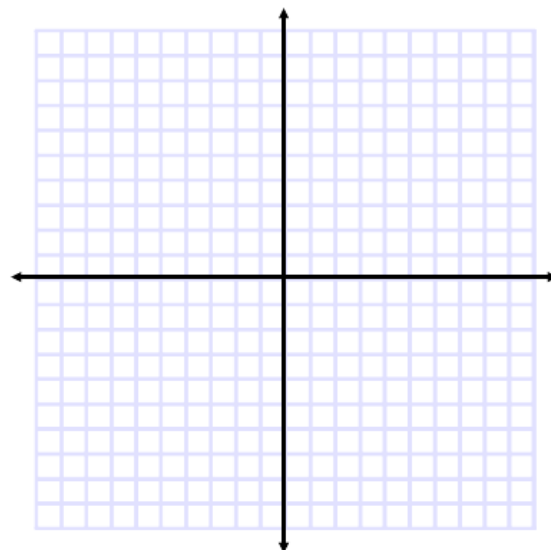
10) $r = 17$ ft, $\theta = \dfrac{4\pi}{3}$

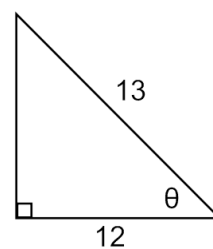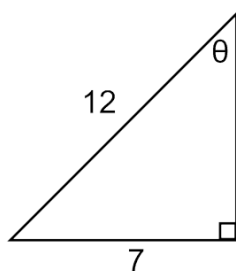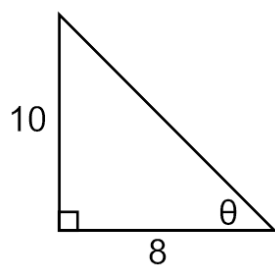11) $r = 9$ cm, $\theta = 270°$

12) $r = 10$ ft, $\theta = 90°$

Use the given point on the terminal side of an angle θ in standard position to evaluate the six trigonometric functions of θ.

(-3, 4)

(3, -5)

How do you find the measure of an angle?

Calculator issues:

$\sin 126°$

$\cot 43°$

$\csc \dfrac{2\pi}{3}$

$\sec 24°$

$\cos 2.67$

$\cot \dfrac{\pi}{4}$

$\csc 237°$

$\sec 1.58$