$\qquad$
Draw an angle with the given measure in standard position.
1.) $130^{\circ}$
2.) $\frac{5 \pi}{4}$
3.) $-\frac{2 \pi}{3}$




Find one positive angle and one negative angle that are coterminal with the given angle.
4.) $-35^{\circ}$
5.) $280^{\circ}$
6.) $-\frac{\pi}{6}$
7.) $\frac{7 \pi}{5}$

Convert the degree measure to radians or the radian measure to degrees.
8.) $270^{\circ}$
9.) $-135^{\circ}$
10.) $\frac{11 \pi}{6}$
11.) $-\frac{\pi}{18}$

Evaluate the trigonometric function. When possible, give an exact answer. When using a calculator, round answers to the nearest hundredth.
12.) $\cos \frac{\pi}{4}$
13.) $\sin \frac{\pi}{6}$
14.) $\cot \frac{\pi}{9}$
15.) $\csc \frac{4 \pi}{5}$

Find the arc length and area of a sector with the given radius $r$ and central angle $\theta$. Round answers to the nearest hundredth.
16.) $r=5 \mathrm{~m}, \theta=\frac{\pi}{2}$
17.) $r=11 \mathrm{ft}, \theta=200^{\circ}$
18.) A ramp with an incline of $15^{\circ}$ is being used to load material into a truck. The tailgate of the truck is 3 feet off of the ground. To the nearest tenth of a foot, find the length of the ramp.
19.) An airplane climbs at an angle of $11^{\circ}$ with the ground. Find the ground distance that the plane has covered when it has attained an altitude of 400 feet. Round to the nearest foot.

