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Vocabulary: Inscribed angle, central angle, arc measure, sector, arc length.
4) Find $m \angle 1$ and $m \angle 2$ Find $\angle C$ FHI

1) An insulated foam sleeve is made to fit over a water pipe. The distance from the center of the water pipe to the edge of the sleeve is 6 inches. The hole in the center has
2) $\qquad$ a radius of 3 inches. What is the area of the face of the foam sleeve?
A. $9.42 \mathrm{in}^{2}$
B. $18.84 \mathrm{in}^{2}$
C. $84.78 \mathrm{in}^{2}$
D. $141.30 \mathrm{in}^{2}$

3) This circle, with center point $Q$, has a radius of 10 centimeters. The length of the minor arc NP is 20.42 centimeters. To the nearest degree, what is the value of $\mathbf{x}$ ?
4) $\qquad$
A. $110^{\circ}$
B. $117^{\circ}$
C. $204^{\circ}$
D. $233^{\circ}$

5) Find the area of the shaded sector of circle $O$.
A. $5 \pi$
B. $20 \pi$
C. $25 \pi$
D. $50 \pi$

6) $\qquad$
7) What is the area of the shaded part of the circle?
A. $\frac{57}{4} \pi \mathrm{~cm}^{2}$
B. $\frac{135}{8} \pi \mathrm{~cm}^{2}$
C. $\frac{405}{8} \pi \mathrm{~cm}^{2}$
D. $\frac{513}{8} \pi \mathrm{~cm}^{2}$

8) $\qquad$
9) What is the measure of $\angle A B C$ ?
A. $15^{\circ}$
B. $30^{\circ}$
C. $60^{\circ}$
D. $120^{\circ}$

10) In this circle, $A B$ is tangent to the circle at point $B, A C$ is tangetnt to the circle at point $C$, and point $D$ lies on the circle. What is the $\boldsymbol{m} \angle B A C ?$

11) The measure of $\widehat{C D}$ is $80^{\circ}$. What is the value of $x$ ?
A. 50
B. 40
C. 35
D. 25

12) $\qquad$ finds the height of this stack?
13) $\qquad$
A. $\frac{240}{\pi}$
B. $240 \pi$
C. $\frac{120}{\pi}$
D. $120 \pi^{`}$
14) The spokes of a bicycle wheel form 10 congruent central angles. The diameter of the circle formed by the outer edge of the wheel is 18 inches. What is the length, to the
15) $\qquad$ nearest tenth inch, of the outer edge of the wheel between two consecutive spokes?

A. 1.8 inches
B. 5.7 inches
C. 11.3 inches
D. 25.4 inches
