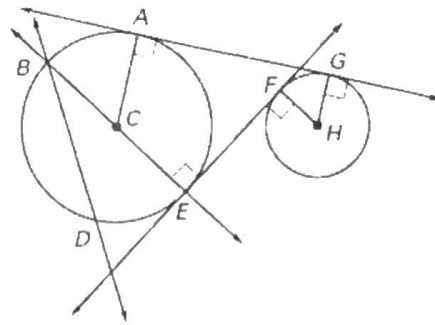


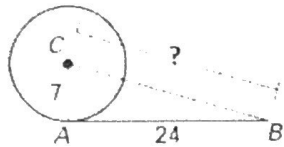
Directions: Match the notation with term that best describes it.

- | | |
|-----------------------------|---------------------------------------|
| <u>E</u> 1) F | A. Center |
| <u>G</u> 2) \overline{FE} | B. Chord |
| <u>D</u> 3) \overline{HG} | C. Diameter |
| <u>B</u> 4) \overline{DB} | D. Radius |
| <u>A</u> 5) C | E. Point of tangency |
| <u>C</u> 6) \overline{BE} | F. Common external tangent |
| <u>H</u> 7) \overline{DB} | G. Common internal tangent |
| <u>F</u> 8) \overline{AG} | H. Secant |



Directions: Solve each problem.

9) What is CB?

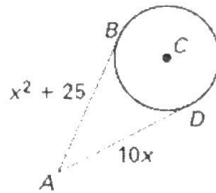


$$7^2 + 24^2 = ?^2$$

$$625 = ?^2$$

$$\boxed{25 = ?}$$

10) What is AB?



$$x^2 + 25 = 10x$$

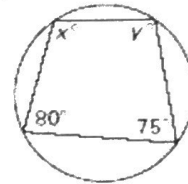
$$x^2 - 10x + 25 = 0$$

$$(x-5)(x-5) = 0$$

$$x = 5$$

$$\boxed{AB = 50}$$

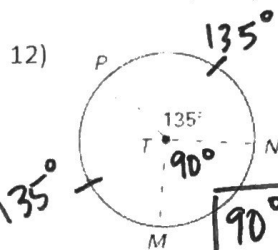
11) What is x & y?



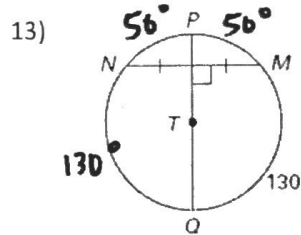
$$x = 105$$

$$y = 100$$

Directions: Find $m\widehat{MN}$.



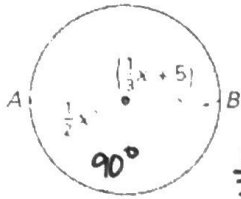
$$\boxed{90^\circ = m\widehat{MN}}$$



$$\boxed{m\widehat{MN} = 100^\circ}$$

Directions: What is x?

14)



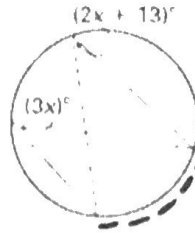
$$\frac{1}{2}x + \frac{1}{3}x + 5 + 90 = 180$$

$$\frac{5}{6}x + 95 = 180$$

$$\frac{5}{6}x = 85$$

$$\boxed{x = 102}$$

15)

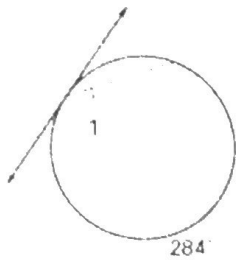


$$2x + 13 = 3x$$

$$\boxed{13 = x}$$

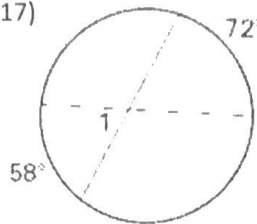
Directions: Find $m\angle 1$.

16)



$$\boxed{m\angle 1 = 142^\circ}$$

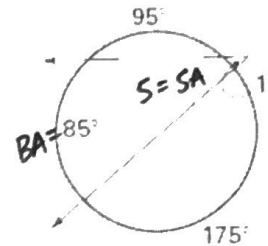
17)



$$m\angle 1 = \frac{72 + 58}{2}$$

$$\boxed{m\angle 1 = 65^\circ}$$

18)

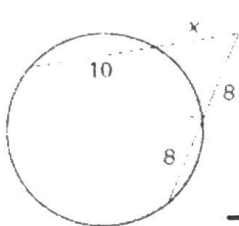


$$m\angle 1 = \frac{85 - 5}{2}$$

$$\boxed{m\angle 1 = 40^\circ}$$

Directions: Solve for x.

19)



$$x(x+10) = 8(16)$$

$$x^2 + 10x - 128 = 0$$

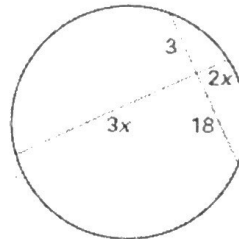
$$\frac{-10 \pm \sqrt{10^2 - 4(1)(-128)}}{2(1)}$$

$$\frac{-10 \pm \sqrt{100 + 512}}{2} = \frac{-10 \pm \sqrt{612}}{2}$$

$$\begin{aligned} a &= 1 \\ b &= 10 \\ c &= -128 \end{aligned}$$

Directions: Solve each problem.

20)



$$\boxed{7.37}$$

$$\rightarrow -17.37$$

21) What is the arc length of the smaller segment?

$$AL = \frac{2\pi r \theta}{360} = \frac{2 \cdot \pi \cdot 6 \cdot 90}{360} = \frac{1080\pi}{360} = \boxed{3\pi u}$$

$$\approx 9.42 u$$

22) What is the area of the smaller sector?

$$A_{\text{sector}} = \frac{\pi r^2 \theta}{360} = \frac{\pi \cdot 6^2 \cdot 90}{360} = \frac{3240\pi}{360} = \boxed{9\pi u^2}$$

$$\approx 28.27 u^2$$

