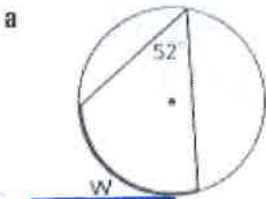
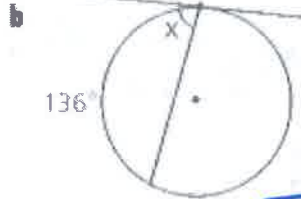


Page 475; #6, 13, 18, 19, 23-26, 30, 33, 34

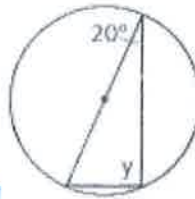
6 Find the measure of each angle or arc that is labeled with a letter.



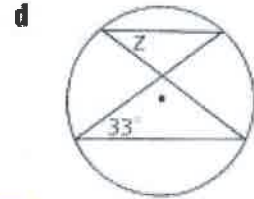
$$52 \cdot 2 = \boxed{104^\circ}$$



$$\frac{136}{2} = \boxed{68^\circ}$$



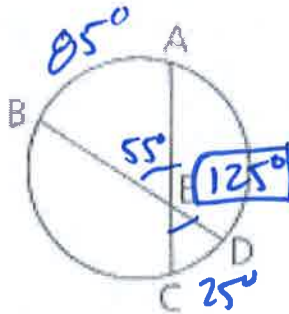
$$\frac{180}{2} = \boxed{90^\circ}$$



$$\boxed{33^\circ}$$

13 Given: $\widehat{AB} = 85^\circ$,
 $\widehat{CD} = 25^\circ$

Find: $\angle AED$

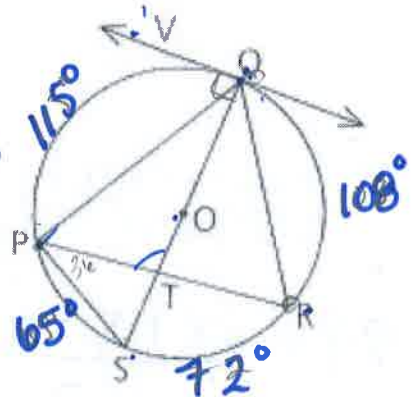


$$\angle BEA = \frac{85 + 25}{2} = 55$$

18 Given: \overline{VQ} is tangent to $\odot O$ at Q.
 \overline{QS} is a diameter of $\odot O$.

$\widehat{PQ} = 115^\circ$; $\angle RPS = 36^\circ$

- Find: a $\angle R$ 57.5 e $\angle QPR$ 74 i $\widehat{PRQ} = 245^\circ$
 b $\angle S$ 57.5 f $\angle QPS$ 90 j $\widehat{RSP} = 137^\circ$
 c \widehat{SR} 72 g $\angle QTP$ 93.5 k $\angle VQS$ 90
 d \widehat{QR} 108 h $\angle PQV$ 57.5 l $\angle QOP$ 115

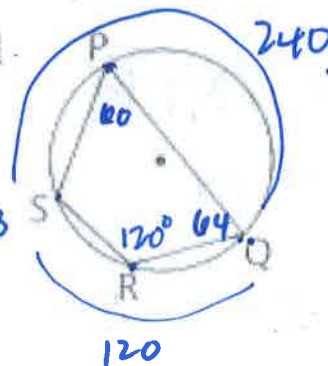


19 Given $m\angle P = 60$ and $m\widehat{PSR} = 128$, find $m\angle Q$, $m\angle R$, and $m\angle S$.

$$\widehat{SPQ} = 360 - 120 = 240$$

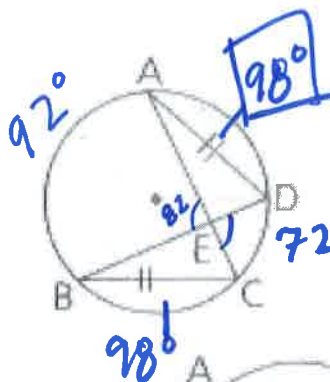
$$360 - 120 - 64 - 60 = 116^\circ$$

$$\begin{aligned} \angle P &= 60^\circ \\ \angle Q &= 64^\circ \\ \angle R &= 120^\circ \\ \angle S &= 116^\circ \end{aligned}$$



23 Given: $\widehat{AB} = 92^\circ$,
 $\angle AEB = 82^\circ$

Find: \widehat{AD}



$$82 = \frac{92 + x}{2}$$

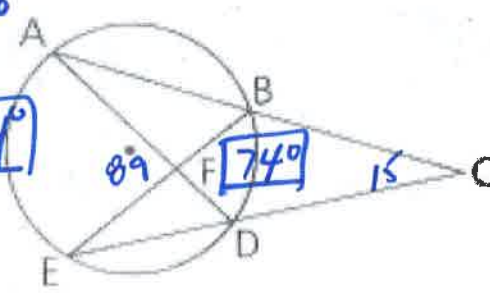
$$164 = 92 + x$$

$$x = 72$$

24 Given: $\angle AFE = 89^\circ$,
 $\angle C = 15^\circ$

Find: \widehat{AE} and \widehat{BD}

104°



system of equations

$$15 = \frac{\widehat{AE} - \widehat{BD}}{2}$$

$$\Rightarrow 30 = \widehat{AE} - \widehat{BD}$$

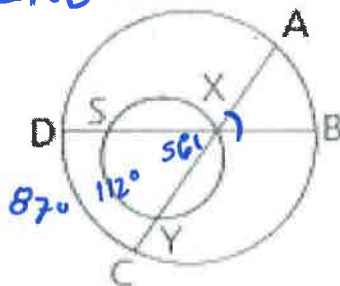
$$89 = \frac{\widehat{AE} + \widehat{BD}}{2}$$

$$\Rightarrow 178 = \widehat{AE} + \widehat{BD}$$

$$208 = 2\widehat{AE}$$

25 Given: $\widehat{SY} = 112^\circ$,
 $\widehat{DC} = 87^\circ$

Find: \widehat{AB}



$$\frac{112}{2} = 56$$

$$56 = \frac{87 + \widehat{AB}}{2}$$

$$112 = 87 + \widehat{AB}$$

$$\widehat{AB} = 25$$

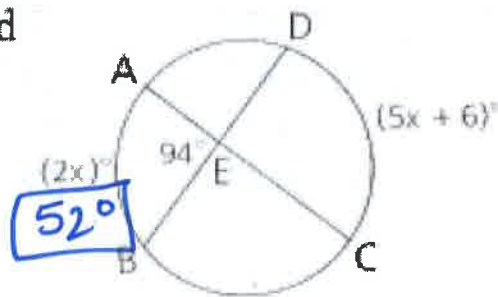
28 If $\widehat{DC} = (5x + 6)^\circ$, $\widehat{AB} = (2x)^\circ$, and
 $\angle AEB = 94^\circ$, find \widehat{AB} .

$$94 = \frac{2x + 5x + 6}{2}$$

$$188 = 7x + 6$$

$$182 = 7x$$

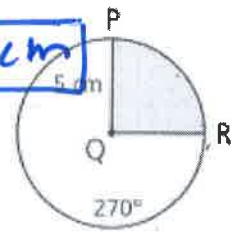
$$x = 26$$



30 a Find the area and the circumference of $\odot Q$ to the nearest tenth. $A = 25\pi = \boxed{78.5 \text{ cm}^2}$, $C = 10\pi \approx \boxed{31.4 \text{ cm}}$

b Find the area of the shaded region to the nearest tenth.

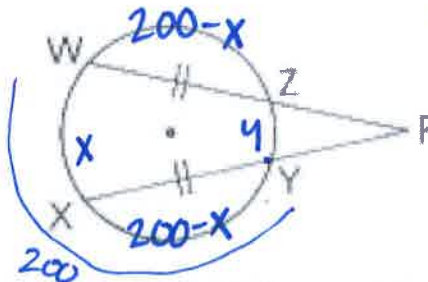
c Find the length of \widehat{PR} to the nearest tenth.



$\rightarrow \left(\frac{1}{4}\right) 25\pi = 19.6 \text{ cm}^2$

$\rightarrow \frac{1}{4} 10\pi = \boxed{7.9 \text{ cm}}$

33 Given: $\overline{WZ} \cong \overline{XY}$,
 $\widehat{WXY} = 200^\circ$
 Find: $\angle P$



$x + 200 - x + y + 200 - x = 360$

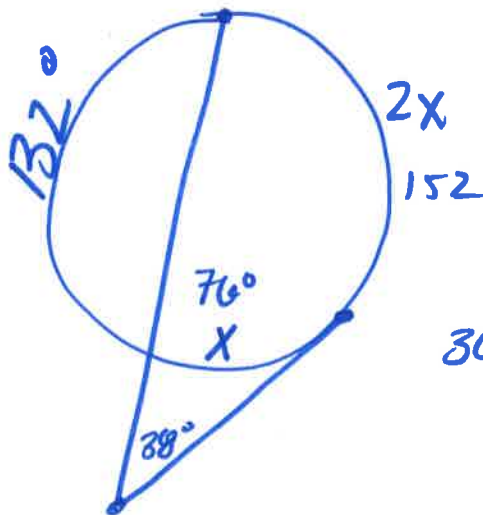
$400 - x + y = 360$

$40 = x - y$

$\angle P = \frac{1}{2}(x - y) = \frac{1}{2}(40)$

$= \boxed{20^\circ}$

34 A secant and a tangent to a circle intersect to form an angle of 38° . If the measures of the arcs intercepted by this angle are in a ratio of 2:1, find the measure of the third arc.



$38 = \frac{2x - x}{2}$

$x = 76$

$360 - 152 - 76 = \boxed{132^\circ}$

