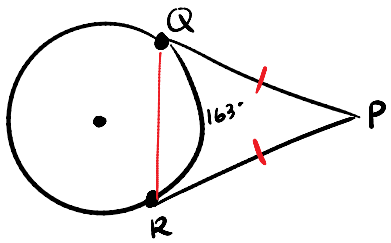
Section 10.6
p. 482: 4, 7, 16, 17, 22-24

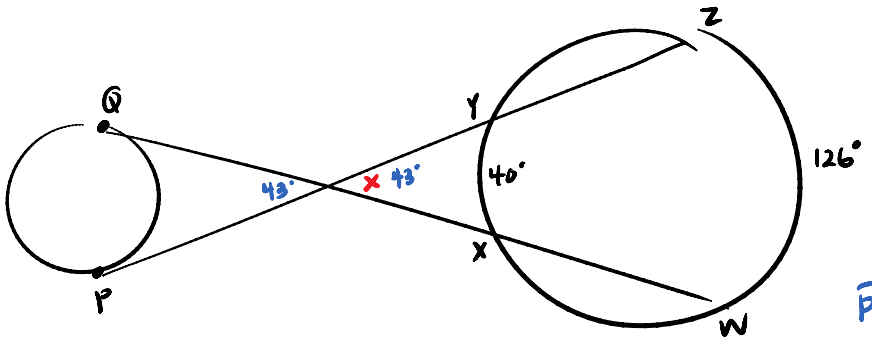
#4



Find: a. $\angle P$ 17°

b. $\angle PQR$ $180-17 = \frac{163}{2} = \boxed{81.5^\circ}$

#7



$x = \frac{126-40}{2}$

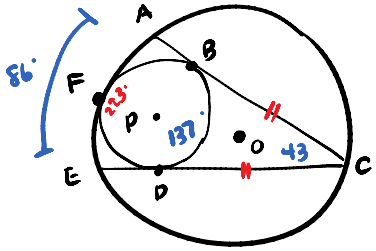
$= \frac{86}{2}$

$= 43^\circ$

$\overset{\frown}{PQ} = 180 - 43$

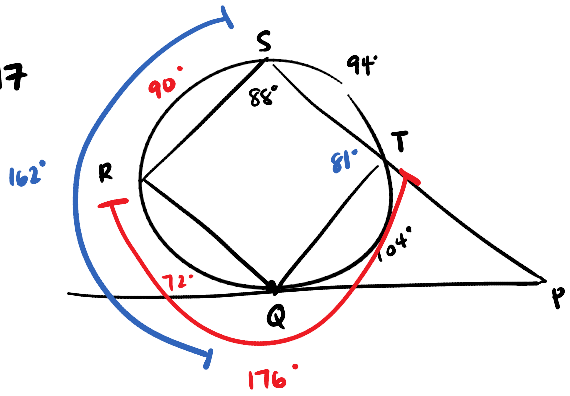
$= \boxed{137^\circ}$

#16



Find $\overset{\frown}{AE}$ $\boxed{86^\circ}$

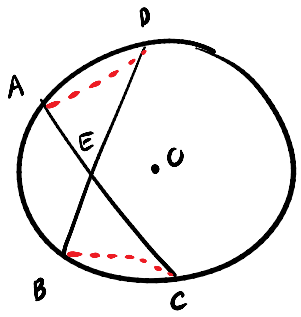
#17



Find: a. $\angle P$ $\frac{162-104}{2} = \boxed{29^\circ}$

b. $\angle STQ$ $\boxed{81^\circ}$

#22



Prove a.) $m\overset{\frown}{AB} + m\overset{\frown}{CD} = 2(m\angle CED)$

$m\angle D = \frac{1}{2}(\overset{\frown}{AB})$

$m\angle DAC = \frac{1}{2}(\overset{\frown}{DC})$

$\frac{1}{2}(m\overset{\frown}{AB}) + \frac{1}{2}(m\overset{\frown}{DC}) = m\angle D + m\angle DAC$

$m\overset{\frown}{AB} + m\overset{\frown}{DC} = 2 \cdot m\angle D + 2 \cdot m\angle DAC$

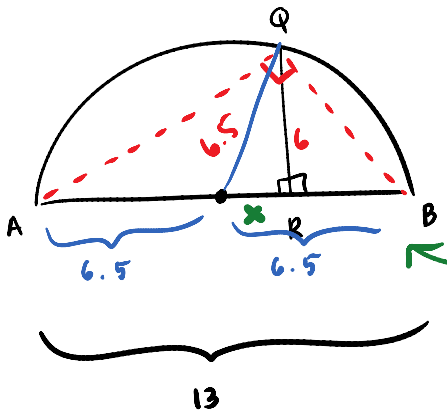
$= 2(m\angle D + m\angle DAC)$

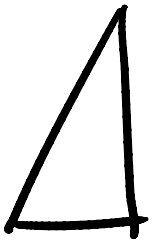
$= 2(m\angle CED)$ ← exterior ∠ theorem!

b. prove $AE \cdot EC = BE \cdot ED$

1. $\odot O$	1. Given
2. $\angle DEA \cong \angle BEC$	2 V.A. are $\cong$
3. $\angle DAE \cong \angle EBC$	3. If 2 inscribed ∠s intercept the same arc → ∠s $\cong$
4. $\triangle ADE \sim \triangle BCE$	4. AA~
5. $\frac{AE}{BE} = \frac{ED}{EC}$	5. CSSTP
6. $AE \cdot EC = BE \cdot ED$	6. Means Extremes Product Th^{m}

#23



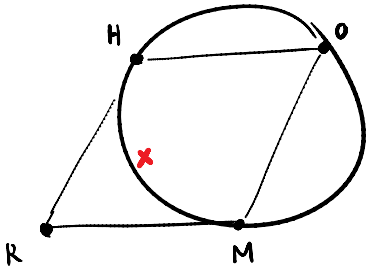


Use triple!!

$x = 2.5$

$\boxed{RB = 4}$

#24



RHOM is a rhombus

Find $m\overset{\frown}{HM}$

$m\angle R = 180 - x$ (tan-tan ∠)

$m\angle O = \frac{1}{2}x$ (inscribed ∠)

$\angle R \cong \angle O$ (opp ∠'s $\cong$)

So: $180 - x = \frac{1}{2}x$

$180 = \frac{3}{2}x$

$\boxed{120 = x}$