HW p 216 EX 1

8) $\underline{w = 56°}$ ($\angle$ of tan AD, chord AB)

$B\hat{A}O + 56° = 90°$ (Radius OA $\perp$ tan DA)
$\therefore B\hat{A}O = 34°$
but $x = B\hat{A}O$ ($\angle$s of isosceles Δ OAB)
$\underline{x = 34°}$

$\underline{y = x = 34°}$ ($\angle$ of tan AE, chord AC)

$z + x + B\hat{A}O = 180°$ (internal $\angle$s of Δ = 180°)
$\therefore z = 180° - 34° - 34°$
$\underline{= 112°}$

10) In Δ OFG and Δ OHG is:
1. OF = OH (Radii)
2. FG = HG (Given)
3. OG is common
$\therefore \Delta OFG \equiv \Delta OHG$ (SSS)
$\therefore \underline{w = 62°}$ (Δ^e Congruent)

$F\hat{O}H = 2x$ (Centre $\angle$ = 2x circumference
$2x = 124°$
$\underline{x = 62°}$

$OF = OG$ (Radii)
$\therefore y = \hat{G}_1$ ($\angle$s of isosceles Δ OFC)
$\therefore w + 2y = 180°$ ($\angle$s of Δ = 180°)
$2y = 180° - w$
$= 180° - 62°$
$\underline{y = 59°}$

$z = E\hat{F}G$ (exterior $\angle$ cyclic quadrilateral)
$= y + 23°$
$= 59° + 23°$
$= 82°$

<u>Continue.</u> <u>P217 EX 1</u>

14) 1) $V_4 = x$ (Vertically oppisite)
$P_1 = x$ ($\angle$ between tan ST and chord SN)
$P_2 = x$ ($\angle$ between tan SW and chord RS)
$\hat{P}_1 = Q\hat{R}V = x$ (exterior $\angle$ ~~between tan~~ of cyclic quadrilateral)

14.2) $Q\hat{R}V = \hat{P}_1 = x$ (Prooved allready)
$\therefore$ QR // NW (Corresponding $\angle^s$ =)

15).i) $\hat{M}_3 = 90°$ ($\angle$ on diameter)
and $\hat{R}_4 = \hat{M}_3$ (Corresponding $\angle$s, MK // RO)
$\therefore R_4 = 90°$
$\therefore$ RI = RM (OR $\perp$ MI bisects chord MI)

15.2) In Δ PJR and Δ PMR is.
1. $\hat{R}_1 = \hat{R}_2 = 90°$ (OR $\perp$ MI)
2. ~~J~~R I = MI (proved allready)
3. PR is common
$\therefore \Delta PJR \equiv \Delta PMR$ (SAS)
$\therefore \hat{J}_1 = \hat{M}_2$ ($\Delta^s \equiv$)
but $\hat{M}_1 = \hat{J}_1$ ($\angle$ between tan NM and chord PM)
$\therefore \hat{M}_1 = \hat{M}_2$

15.3) $J\hat{M}N = \hat{K}$ ($\angle$ between tan NM, chord JM)

but $\hat{O}_2 = \hat{K}$ (corresponding $\angle$s, MK // RO)

$\therefore J\hat{M}N = \hat{O}_2$

$\therefore$ JOMN is a cyclic quadrilateral because JN subtends equal $\angle$s at $J\hat{M}N$ and $\hat{O}_2$

Similar polygons

p 218

Similar $\rightarrow$ $\boxed{\text{angles } =}$ $\rightarrow$ $\hat{A} = \hat{X}$, $\hat{B} = \hat{Y}$, $C = Z$?

Similar $\rightarrow$ $\boxed{\text{corresponding sides in proportion}}$ $\rightarrow$ $\frac{S1}{Sa} = \frac{S}{S}$

See worked eg. p 218.

if yes. then

pol A ||| pol B

eg ABCDE ||| FGHIJ

H.W. p219 EX2 : 1.1

1.5