

P. 181, #1-16

1. $\overline{AE} \perp \overline{AB}$
2. $\overline{AB} \neq \overline{FG}$ arc skew
3. $\overline{AE} \parallel \overline{FB}$
4. $\overline{AEF} \parallel \overline{DHG}$
5. $\angle 3 \cong \angle 5$
 $\angle 4 \cong \angle 8$
6. $\angle 1 \cong \angle 7$
 $\angle 6 \cong \angle 2$
7. $\angle 2 \cong \angle 8$
 $\angle 3 \cong \angle 7$
 $\angle 1 \cong \angle 5$
 $\angle 4 \cong \angle 6$
8. $\angle 4 \cong \angle 5$
 $\angle 3 \cong \angle 8$
9. 135° - Corr. \angle s
10. $15x - 7 = 19x - 15$
 $-7 = 4x - 15$
 $8 = 4x$
 $x = 2$
 $\angle = 23^\circ$
11. $43x + 36 = 54x + 14$ - alt. ext \angle s
 $36 = 11x + 14$
 $22 = 11x$
 $x = 2$
 $\angle = 122^\circ$
12. $m\angle 8 = 13(3) + 20 = 39 + 20 = 59^\circ$
 $m\angle 6 = 7(3) + 38 = 21 + 38 = 59^\circ$
 $m\angle 8 = m\angle 6$
 $\angle 8 \cong \angle 6$
a//b - conv. of the corr. \angle s Post.
13. $\angle 1 \cong \angle 5$
a//b - conv. of the alt ext \angle s Thm
14. $m\angle 8 + m\angle 7 = 180$
a//b - conv. of the same side int \angle s Thm
15. $m\angle 8 = m\angle 4$
 $\angle 8 \cong \angle 4$
a//b - conv of the alt int \angle s Thm
16. $m\angle 1 = 3(14) + 12$
 $m\angle 1 = 54^\circ$
 $m\angle 2 = 4(14) - 2$
 $m\angle 2 = 54^\circ$
 $m\angle 1 = m\angle 2$
 $\angle 1 \cong \angle 2$
The guy wires are // by the conv. of the Corr \angle s Post.