

p. 162 #1, 2, 7, 8, 9, 11, 15-17

1. a) S b) A c) N d) N e) N

2.

Statements	Reasons
1. $\overline{AB} \perp \overline{BC}$	1. Given
2. $\angle ABC$ is a right $\angle$	2. definition $\perp$
3. $\overline{DC} \perp \overline{BC}$	3. Given
4. $\angle DCB$ is a right $\angle$	4. definition $\perp$
5. $\angle ABC \cong \angle DCB$	5. All right $\angle$ s $\cong$
6. $\angle 1 \cong \angle 2$	6. Given
7. $\overline{BC} \cong \overline{CB}$	7. Symmetric property
8. $\triangle ABC \cong \triangle DCB$	8. ASA (5,7,6)
9. $\overline{AC} \cong \overline{DB}$	9. CPCTC

7. a)  $x = 28 \Rightarrow m\angle G = 30$  b)  $y = 15 \Rightarrow P_{\triangle HGF} = 114$

8.  $x = 30, y = 30,$  and  $z = 120$

9.  $A = \frac{1}{2}bh = \frac{1}{2}4 \cdot 4 = 8$

11. The triangles are  $\cong$  by SAS

15.  $x = -5$  or  $x = 11$

16.  $x = 3, y = -1 \Rightarrow CR = x + y = 2$

17.  $x = 4 \Rightarrow P = JH + FH + FJ = 16 + 22 + 22 = 60$

p. 321 #7-11, 19, 20

7. 45

8.  $m\angle 1 = m\angle 2 = 50$

9.  $x = 40 \Rightarrow m\angle YZA = 50$

10.  $m\angle BCE = 40$

11.  $m\angle 3 = 20$

19. a)  $x = 65 \Rightarrow \angle ABF = 32.5$  b)  $\angle BCE = 122.5$  c)  $\angle E = 25$

20.  $\angle D = 115$