

Pages 68–69 • CHAPTER TEST **Ch. 2**

1. a. they are vert. \sphericalangle b. If 2 \sphericalangle s are \cong , then they are vert. \sphericalangle s.
2. Answers may vary; for example, $x = -3$
3. If \sphericalangle s are \cong , then their measures are =. If \sphericalangle s have = measures, then they are \cong .
4. 3. Substitution Prop. 4. Subtr. Prop. of = 5. Div. Prop. of =
5. 30 6. 16; 8; 24 7. a. $\sphericalangle 3$ and $\sphericalangle 4$ b. $\sphericalangle 1$ and $\sphericalangle 2$
8. a. They are \cong . b. If 2 \sphericalangle s are supps. of the same \sphericalangle , then the 2 \sphericalangle s are \cong .
9. $(3x + 5) + (6x + 13) = 180$; $9x + 18 = 180$; $9x = 162$; $x = 18$
10. Vert. \sphericalangle s are \cong . 11. Trans. Prop.

12. Statements

Reasons

1. $\overleftrightarrow{DC} \perp \overleftrightarrow{BD}$	1. Given
2. $m\angle 2 = 90$	2. Def. of \perp lines
3. $\sphericalangle 1 \cong \sphericalangle 2$, or $m\angle 1 = m\angle 2$	3. Given
4. $m\angle 1 = 90$	4. Substitution Prop.
5. $\overleftrightarrow{BA} \perp \overleftrightarrow{BD}$	5. Def. of \perp lines