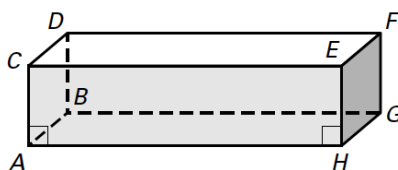


Geo Ch. 3 Review

Use the figure below. Fill in the blank with *parallel*, *skew*, or *perpendicular*.

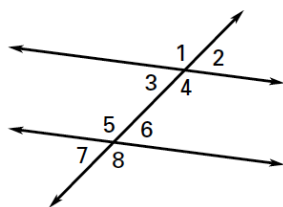
1. \overline{CE} and \overline{AC} are _____.
2. \overline{EH} and \overline{AB} are _____.
3. Plane DBG and plane AHE are _____.



1. _____
2. _____
3. _____

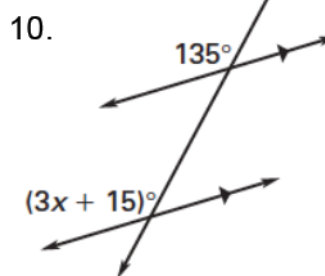
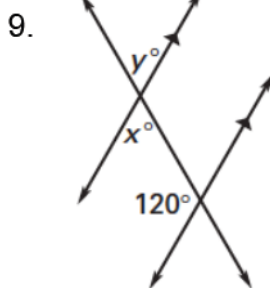
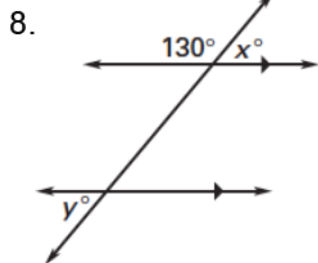
Complete the statement with *corresponding*, *alternate interior*, *alternate exterior*, or *consecutive interior*.

4. $\angle 3$ and $\angle 6$ are _____ angles.
5. $\angle 1$ and $\angle 8$ are _____ angles.
6. $\angle 2$ and $\angle 6$ are _____ angles.
7. $\angle 3$ and $\angle 5$ are _____ angles.



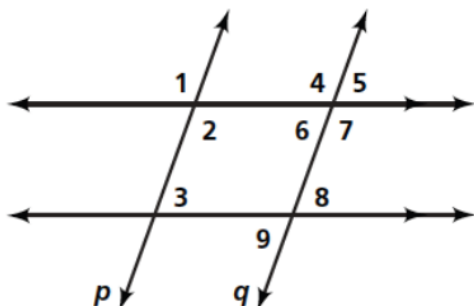
4. _____
5. _____
6. _____
7. _____

Find the value of each variable. Justify your reasoning with a postulate or theorem.



8. _____ 9. _____ 10. _____

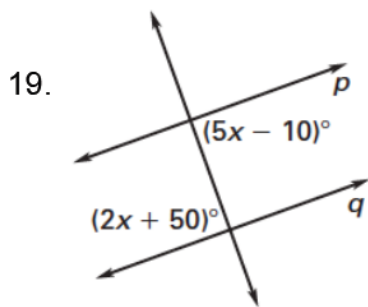
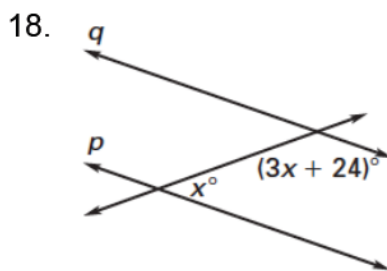
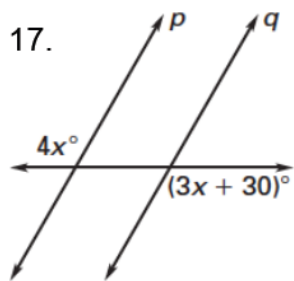
State the theorem or postulate that justifies each statement.



- | | |
|-------------------------------|---|
| 11. $\angle 6 \cong \angle 8$ | 14. If $\angle 2 \cong \angle 4$, then $p \parallel q$. |
| 12. $\angle 5 \cong \angle 8$ | 15. If $\angle 3 \cong \angle 8$, then $p \parallel q$. |
| 13. $\angle 8 \cong \angle 9$ | 16. If $m\angle 2 + m\angle 6 = 180$, then $p \parallel q$. |

- | | |
|-----------|-----------|
| 11. _____ | 14. _____ |
| 12. _____ | 15. _____ |
| 13. _____ | 16. _____ |

Find the value of x that makes $p \parallel q$.

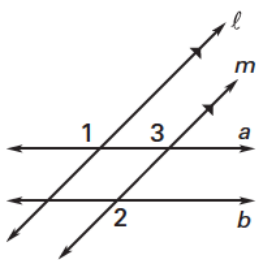


17. _____ 18. _____ 19. _____

20. Complete the two-column proof.

Given: $\ell \parallel m$, $\angle 1 \cong \angle 2$

Prove: $a \parallel b$

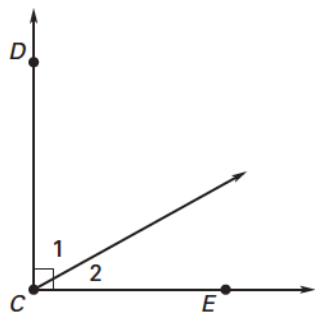


Statements	Reasons
1. $\ell \parallel m$	1. _____
2. $\angle 1 \cong \angle 3$	2. _____
3. $\angle 1 \cong \angle 2$	3. _____
4. $\angle 2 \cong \angle 3$	4. _____
5. $a \parallel b$	5. _____

21. Complete the flow proof of Theorem 3.2.

Given: $\vec{CD} \perp \vec{CE}$

Prove: $\angle 1$ and $\angle 2$ are complementary.



$m\angle DCE = m\angle 1 + m\angle 2$

d. _____

$\vec{CD} \perp \vec{CE}$

a. _____



$\angle DCE$ is a right \angle .

b. _____



$m\angle DCE = 90^\circ$

c. _____

$m\angle 1 + m\angle 2 = 90^\circ$

e. _____



$\angle 1$ and $\angle 2$ are complementary.

f. _____

Answers:

1. perpendicular
2. skew
3. parallel
4. alternate interior
5. alternate exterior
6. corresponding
7. consecutive interior
8. $x = 50, y = 50$
9. $x = 60, y = 60$
10. $x = 40$
11. alternate interior angles
12. corresponding angles
13. vertical angles theorem
14. alternate interior angles converse
15. corresponding angles converse
16. consecutive interior angles converse
17. $x = 30$
18. $x = 39$
19. $x = 20$
20. Reasons:
 1. Given
 2. Corresponding angles
 3. Given
 4. Transitive Property
 5. Alternate exterior angles converse
21. Reasons:
 - a. Given
 - b. Definition of perpendicular
 - c. Definition of right angles
 - d. Angle Addition Postulate
 - e. Substitution or Transitive Property
 - f. Definition of complementary