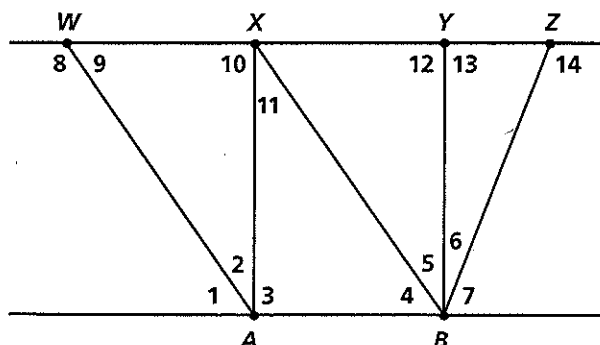# Chapter Test (continued)   Form A

Chapter 3

Use the given information to determine which segments must be parallel.
If there are no such segments, write *none*.

17. $\angle 2 \cong \angle 11$

18. $\angle 2 \cong \angle 5$

19. $m\angle 7 + m\angle 6 + m\angle 13 = 180$

20. $\angle 8 \cong \angle 14$

21. $\angle 9 \cong \angle 1$

22. $\angle 3 \cong \angle 10 \cong \angle 12$

Find the values of the variables.

23.

24.

25.

26. What is the interior angle sum of a convex 35-gon?

27. What is the measure of an exterior angle of a regular 20-gon?

Determine whether the following pairs of lines are *parallel, perpendicular,* or *neither.*

28. $y = x + 3$

$y = -x + 3$

29. $y = 2x - 6$

$y = 2$

30. $y = -\frac{2}{3}x + 1$

$y = -\frac{2}{3}x - 4$

Write the equation of each line described.

31. The line has slope of 6 and contains $(-3, 5)$.

32. The line is perpendicular to $y = 2x + 17$ and contains $(8, -1)$.

**33.** The line passes through $(6, 4)$ and $(-3, 1)$.

Chapter Test

Form A

Chapter 3

Decide whether each statement must be *true* or *false*. Use the figure for Exercises 4–8.

1. Two parallel lines are coplanar.

2. Any two noncoplanar lines are skew.

3. If two lines are not parallel, then they must be skew.

4. $\angle 13$ and $\angle 9$ are same-side interior angles.

5. $\angle 2$ and $\angle 14$ are alternate interior angles.

6. $\angle 13$ and $\angle 7$ are corresponding angles.

7. If $\angle 12 \cong \angle 16$, then $m \parallel o$.

8. If $\angle 11$ and $\angle 6$ are supplementary, then $s \parallel t$.
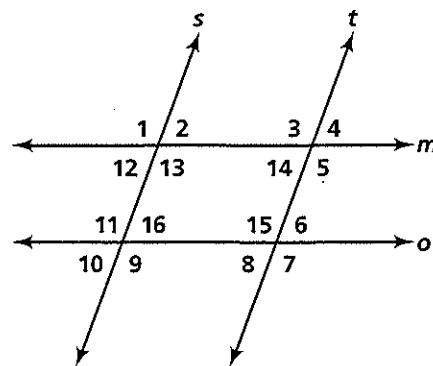
Find $m\angle 1$ and $m\angle 2$. State the theorems or postulates that justify your answers.

9.

10.

11.

12.

13.

14.
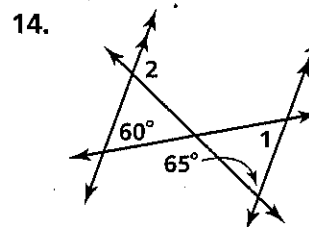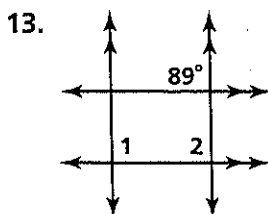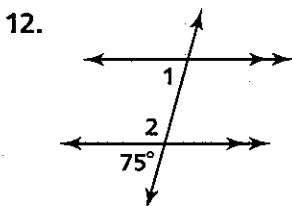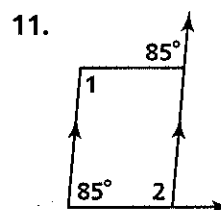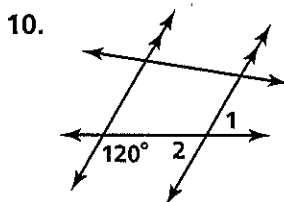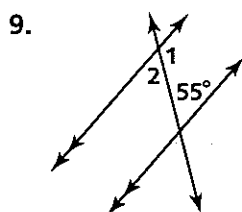
Use a straightedge and compass to complete the constructions.

15. Draw a line m with a point X not on the line. Construct a line through X parallel to m.

16. Construct a right triangle with leg lengths of a and b. _____
a

_____
b