

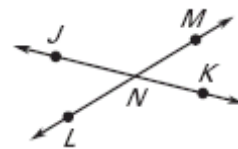
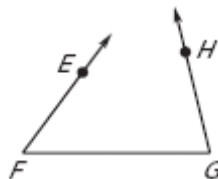
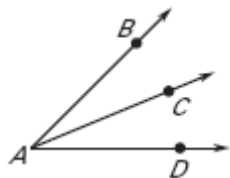
ASSIGNMENT #17

Geometry Section 1.5

Name: _____ Date: _____
Angle Pair Relationships Practice Worksheet

Are the indicated angles *adjacent*?

1. _____ $\angle BAC$ and $\angle CAD$ 2. _____ $\angle EFG$ and $\angle HGF$ 3. _____ $\angle JNM$ and $\angle LNK$



$\angle 1$ and $\angle 2$ are *complementary* angles. Given the measure of $\angle 1$, find $m\angle 2$.

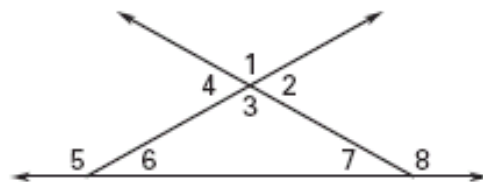
6. $m\angle 1 = 52^\circ$, $m\angle 2 =$ _____ 7. $m\angle 1 = 76^\circ$, $m\angle 2 =$ _____ 8. $m\angle 1 = 19^\circ$, $m\angle 2 =$ _____

$\angle 1$ and $\angle 2$ are *supplementary* angles. Given the measure of $\angle 1$, find $m\angle 2$.

9. $m\angle 1 = 52^\circ$, $m\angle 2 =$ _____ 10. $m\angle 1 = 76^\circ$, $m\angle 2 =$ _____ 11. $m\angle 1 = 19^\circ$, $m\angle 2 =$ _____

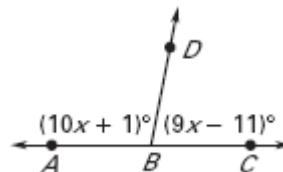
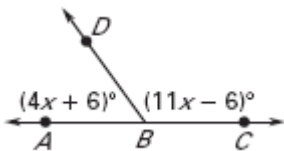
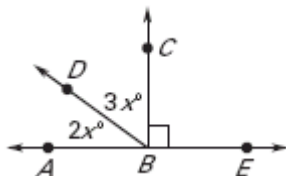
Using the diagram, tell whether the angles are *vertical angles*, a *linear pair*, or *neither*.

12. _____ $\angle 1$ and $\angle 2$ 13. _____ $\angle 1$ and $\angle 3$
14. _____ $\angle 1$ and $\angle 4$ 15. _____ $\angle 1$ and $\angle 5$
16. _____ $\angle 1$ and $\angle 6$ 17. _____ $\angle 1$ and $\angle 7$
18. _____ $\angle 1$ and $\angle 8$ 19. _____ $\angle 2$ and $\angle 4$



Use the diagrams to find the indicated measurements.

20. $x =$ _____ 21. $x =$ _____ 22. $x =$ _____
 $m\angle ABD =$ _____ $m\angle ABD =$ _____ $m\angle ABD =$ _____
 $m\angle DBC =$ _____ $m\angle DBC =$ _____ $m\angle DBC =$ _____



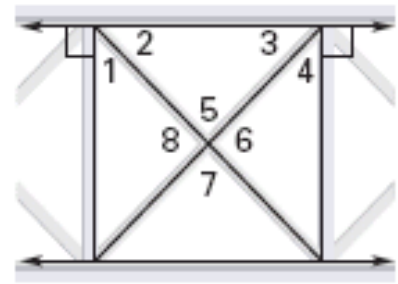
Given: $m\angle A = (4x - 2)^\circ$ and $m\angle B = (11x + 17)^\circ$

23. Find x if the angles are *complementary*. 24. Find x if the angles are *supplementary*.

Stair Railing: A stair railing is designed as shown in the figure.

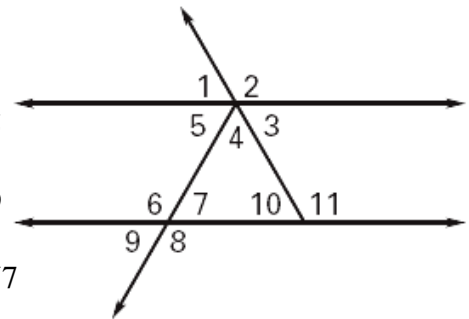
Use the angles identified in the figure to **name two pairs** of the indicated type of angle pair.

25. Complementary angles \angle & \angle \angle & \angle
26. Supplementary angles \angle & \angle \angle & \angle
28. Vertical angles \angle & \angle \angle & \angle
29. Linear pair \angle & \angle \angle & \angle
30. Adjacent angles \angle & \angle \angle & \angle



Using the diagram, tell whether the angles are *vertical angles*, a *linear pair*, or *neither*.

31. _____ $\angle 1$ and $\angle 2$ 32. _____ $\angle 1$ and $\angle 3$
33. _____ $\angle 2$ and $\angle 4$ 34. _____ $\angle 4$ and $\angle 5$
35. _____ $\angle 6$ and $\angle 8$ 36. _____ $\angle 8$ and $\angle 9$
37. _____ $\angle 11$ and $\angle 10$ 38. _____ $\angle 10$ and $\angle 7$



Draw a picture and write an equation to help you solve the following problems.

39. _____ The measure of one angle is 7 times the measure of its *complement*.
Find the measure of each angle.
40. _____ The measure of one angle is 38° less than the measure of its *supplement*.
Find the measure of each angle.