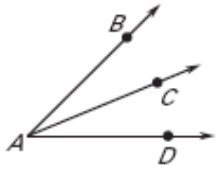
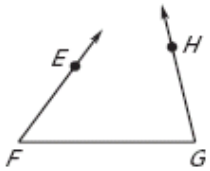
Geometry **Name:_____Date:_____**
Section 1.5 **Angle Pair Relationships Practice Worksheet**

Are the indicated angles *adjacent*?

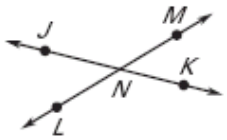
1._____ ∠*BAC* and ∠*CAD*



2._____ ∠*EFG* and ∠*HGF*



3._____ ∠*JNM* and ∠*LNK*



∠ 1 and ∠ 2 are *complementary* angles. Given the measure of ∠1, find *m*∠2.

6. *m*∠1=52°, *m*∠2 = _____ 7. *m*∠1=76°, *m*∠2 = _____ 8. *m*∠1=19°, *m*∠2 = _____

∠ 1 and ∠ 2 are *supplementary* angles. Given the measure of ∠1, find *m*∠2.

9. *m*∠1=52°, *m*∠2 = _____ 10. *m*∠1=76°, *m*∠2 = _____ 11. *m*∠1=19°, *m*∠2 = _____

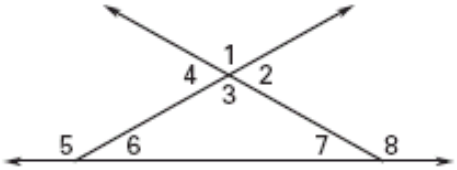
Using the diagram, tell whether the angles are *vertical angles,* a *linear pair,* or *neither.*

12._____ ∠1 and ∠2 13._____ ∠1 and ∠3

14._____ ∠1 and ∠4 15._____ ∠1 and ∠5

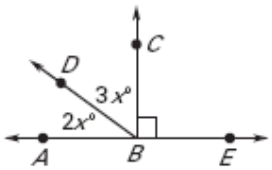
16._____ ∠1 and ∠6 17._____ ∠1 and ∠7

18._____ ∠1 and ∠8 19._____ ∠2 and ∠4

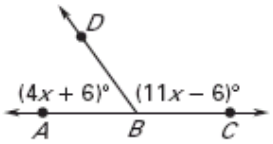


Use the diagrams to find the indicated measurements.

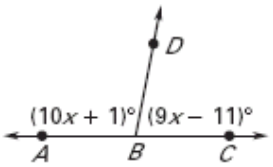
20. x = _____
m∠ *ABD* = _____
m∠ *DBC* = _____



21. x = _____
m∠ *ABD* = _____
m∠ *DBC* = _____



22. x = _____
m∠ *ABD* = _____
m∠ *DBC* = _____



Given: *m*∠*A* = (4*x* – 2)° and *m*∠*B* = (1l*x* + 17)°

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.

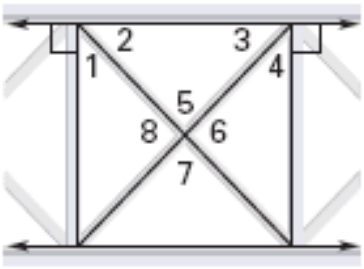
25. Complementary angles ∠ & ∠ ∠ & ∠

26. Supplementary angles ∠ & ∠ ∠ & ∠

28. Vertical angles ∠ & ∠ ∠ & ∠

29. Linear pair ∠ & ∠ ∠ & ∠

30. Adjacent angles ∠ & ∠ ∠ & ∠



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

31._____ ∠1 and ∠2

32._____ ∠l and ∠3

33._____ ∠2 and ∠4

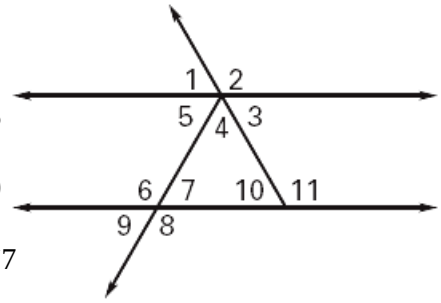
34._____ ∠4 and ∠5

35._____ ∠6 and ∠8

36._____ ∠8 and ∠9

37._____ ∠11 and ∠10

38._____ ∠10 and ∠7

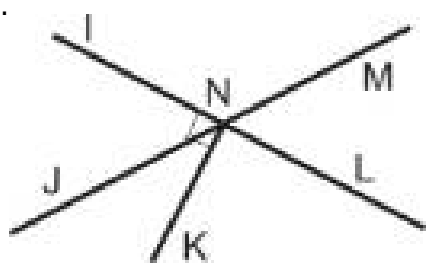


Draw a picture and write an equation to help you solve the following problems.

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.

41.



Identify each of the following:
a) A pair of complementary angles
b) A pair of supplementary angles
c) A pair of adjacent angles
d) Two angles that form a linear pair
e) A pair of vertical angles.

42. Draw and label a diagram that has a pair of complementary angles, a pair of supplementary angles,
a pair of adjacent angles, a linear pair, and a pair of vertical angles.