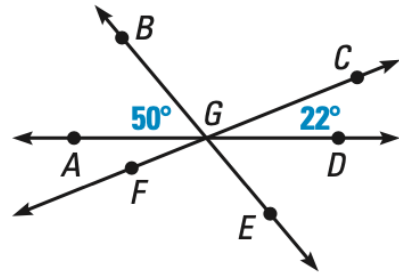Geometry

Name _____

Angle Pairs

Date _____ Per _____

Find the value of each variable.

Vertical Angles Use the diagram to complete the statement.

41. $\angle BGC \cong$ __?__

42. $\angle AGB \cong$ __?__

43. $\angle AGC \cong$ __?__

44. $\angle CGE \cong$ __?__

45. $m\angle AGF =$ __?__ °

46. $m\angle DGE =$ __?__ °

47. $m\angle CGE =$ __?__ °

48. $m\angle BGC =$ __?__ °

49. $m\angle DGF =$ __?__ °

50. $m\angle AGD =$ __?__ °

Use the diagram at the right to answer the following questions.
In the diagram, $\overleftrightarrow{BF} \perp \overleftrightarrow{HD}$ and $\overleftrightarrow{GC} \perp \overleftrightarrow{AE}$.

Complete each statement

a) If the $m\angle 3 = 31°,$ then $m\angle 5 =$

b) If the $m\angle 5 = 29°,$ then $m\angle 4 =$

c) $m\angle CAF = 122°,$ then $m\angle GAB =$

d) $m\angle 7 = 35°,$ then $m\angle 3 =$
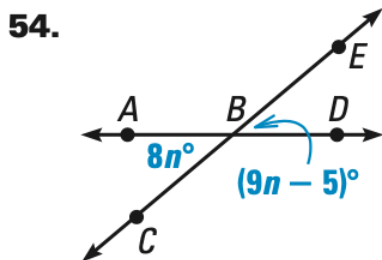
1.

$(5x)°$ $(3x + 60)°$

2.

$(3x - 40)°$ $(x + 20)°$

3.

$(3x + 2)°$

$(5x - 78)°$

4.

$(2r + 3)°$

$89°$

5.

$3x°$

$(2x + 16)°$

6.

$(20t + 5)°$

$15t°$

51. 152° (w + 73)°

52. 78° (5y + 2)°

53. 105° (2x − 11)°

54.
A   B   D   E
8n°
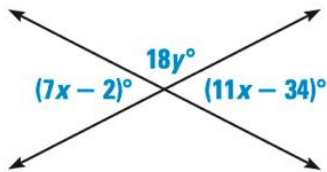(9n − 5)°
C

55. A
(6x + 19)° C
E   B   x°
D

56. C (5p + 28)° D
12p°
B
A   E
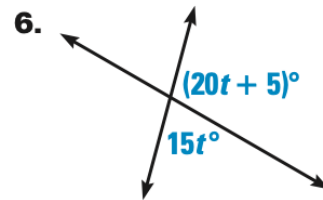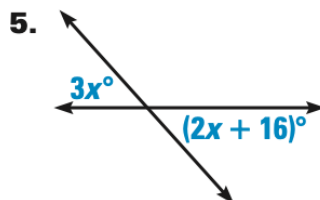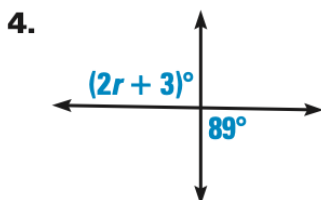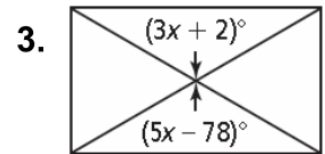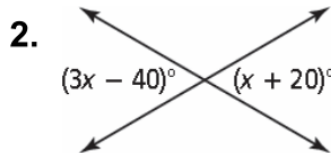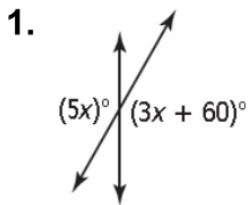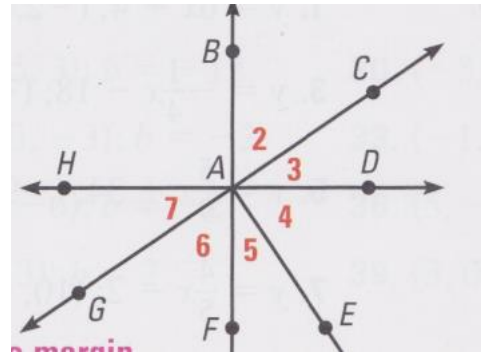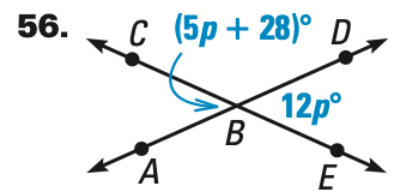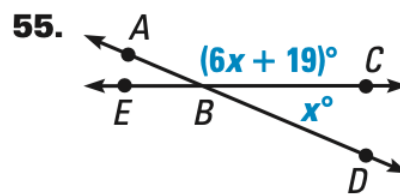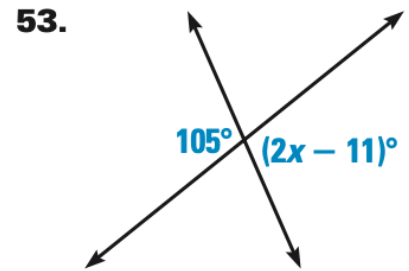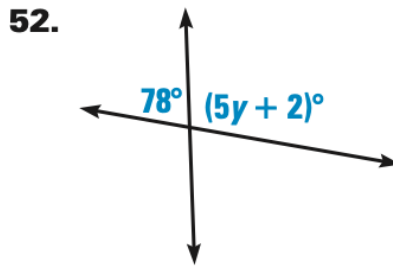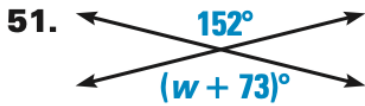
Find the values of x and y in the diagram below.

18y°
(7x − 2)°   (11x − 34)°

Find the measure of two supplementary angles if the measures of the larger angle is 44 more that the measure of the smaller.

Find the measure of two complementary angles if the difference in the measures of the two angles is 12.

The measure of an angle is 5 less than 4 times the measure of its supplement. Find the measure of both angles.