

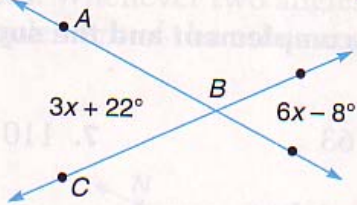
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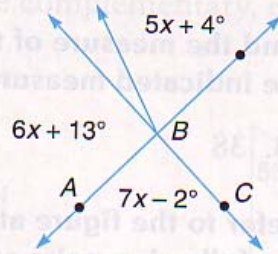
Homework – Set A

Find the value of  $x$  and  $m\angle ABC$ .

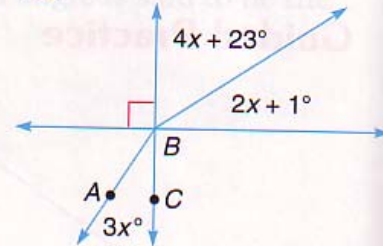
26.



27.



28.

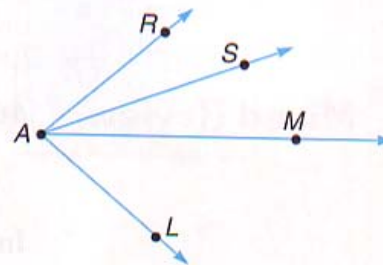


Solve.

29. Find the measures of two supplementary angles if the measure of the larger angle is 44 more than the measure of the smaller.
30. Find the measure of two complementary angles if the difference in the measures of the two angles is 12.

In the figure,  $\overline{AM}$  bisects  $\angle LAR$  and  $\overline{AS}$  bisects  $\angle MAR$ . Given the following conditions, find the value of  $x$  and the measure of the indicated angle.

32.  $m\angle MAR = 2x + 13$ ,  $m\angle MAL = 4x - 3$ ,  
 $m\angle RAL$
33.  $m\angle RAL = x + 32$ ,  $m\angle MAR = x - 31$ ,  
 $m\angle LAM$
34.  $m\angle RAS = 25 - 2x$ ,  $m\angle SAM = 3x + 5$ ,  
 $m\angle LAR$
35.  $m\angle RAM = 31 - x$ ,  $m\angle LAM = 17 - 3x$ ,  $m\angle SAR$
36.  $m\angle RAL = 5x - 7$ ,  $m\angle MAS = x + 3$ ,  $m\angle MAR$



37. Suppose  $\angle X$  and  $\angle Y$  are supplementary angles. If  $m\angle X = x^2 - 9x$  and  $m\angle Y = 11x + 12$ , find the value of  $x$ ,  $m\angle X$ , and  $m\angle Y$ .
38. Suppose  $\angle A$  and  $\angle B$  are complementary angles, and  $\angle C$  and  $\angle D$  are also complementary angles. If  $m\angle A = 2x + 3$ ,  $m\angle B = y - 2$ ,  $m\angle C = 2x - y$ , and  $m\angle D = x - 1$ , find the values of  $x$  and  $y$ ,  $m\angle A$ ,  $m\angle B$ ,  $m\angle C$ , and  $m\angle D$ .