A _____ is a point that _____ (cuts in half) a segment.

Ex 1:

a) M is the midpoint $\overline{AB}$. Find AM.

   AM = 6x + 7

   MB = 4x + 5

b) M is the midpoint $\overline{CD}$. Find MD.

   CM = 3x − 1

   MD = x + 9

A point _____ two points does _____ necessarily mean that it lies in the middle.

Ex 2:

a) B is between points A and C. Find AC.

   AB = x

   BC = 4

   AC = 2x − 9

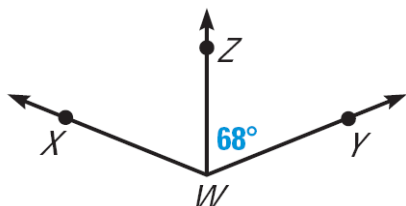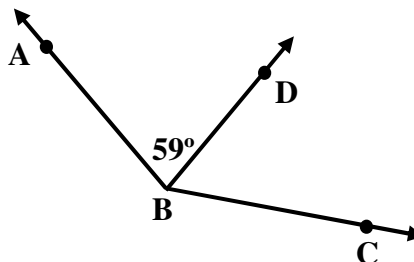**b)** Y is between points X and Z. Find XZ.

   XY = 2x

   YZ = 6

   XZ = 3x − 8

Ex 3:

a) $\overrightarrow{WZ}$ bisects ∠XWY. Find the two angles measures not given in the diagram.

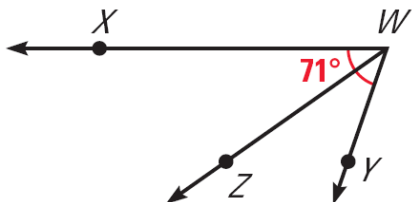**b)** $\overrightarrow{BD}$ bisects ∠ABC. Find the two angles measures not given in the diagram.
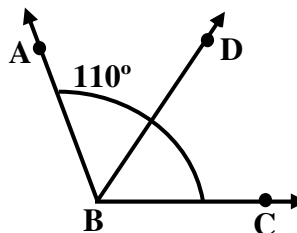
One continuous arc on a diagram means that the _____ angle has the indicated measure.

Ex 4:

a) $\overrightarrow{WZ}$ bisects $\angle XWY$. Find the two angles measures not given in the diagram.

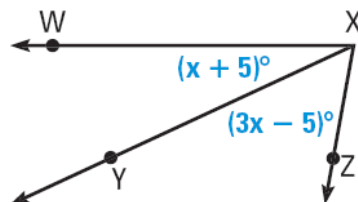**b)** $\overrightarrow{BD}$ bisects $\angle ABC$. Find the two angles measures not given in the diagram.
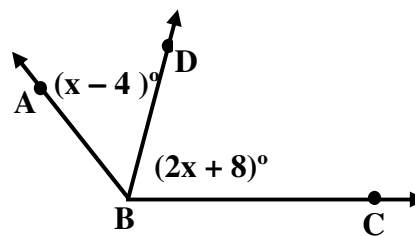

Ex 5:
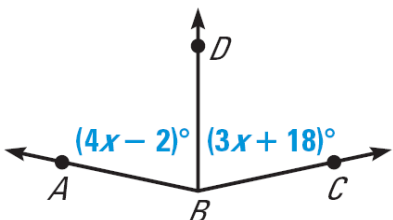
a) Given m$\angle WXZ = 80°$, find m$\angle YXZ$.

b) Given m$\angle ABC = 121°$, find m$\angle DBC$.

Ex 6:

a) $\overrightarrow{BD}$ bisects $\angle ABC$. Find m$\angle ABC$.

b) $\overrightarrow{BD}$ bisects $\angle ABC$. Find m$\angle ABC$.