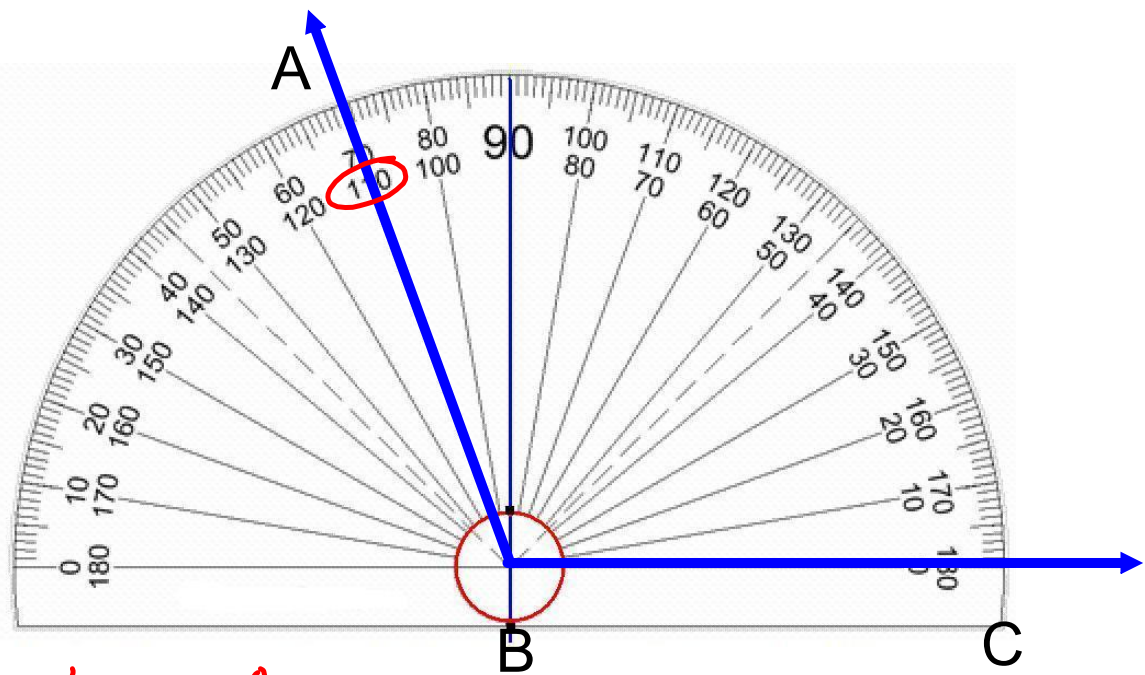


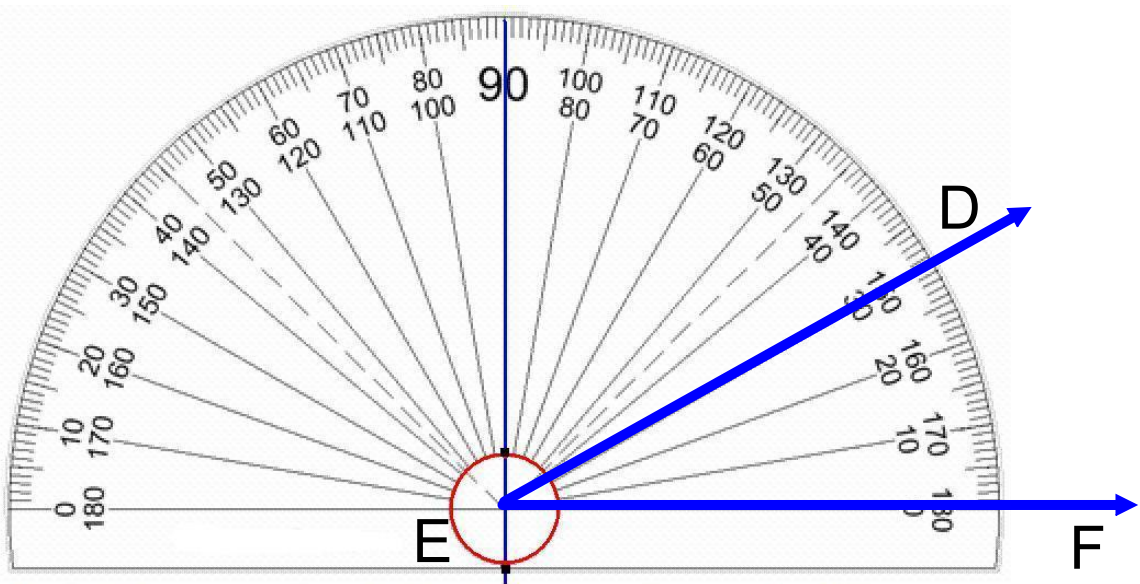
Angles



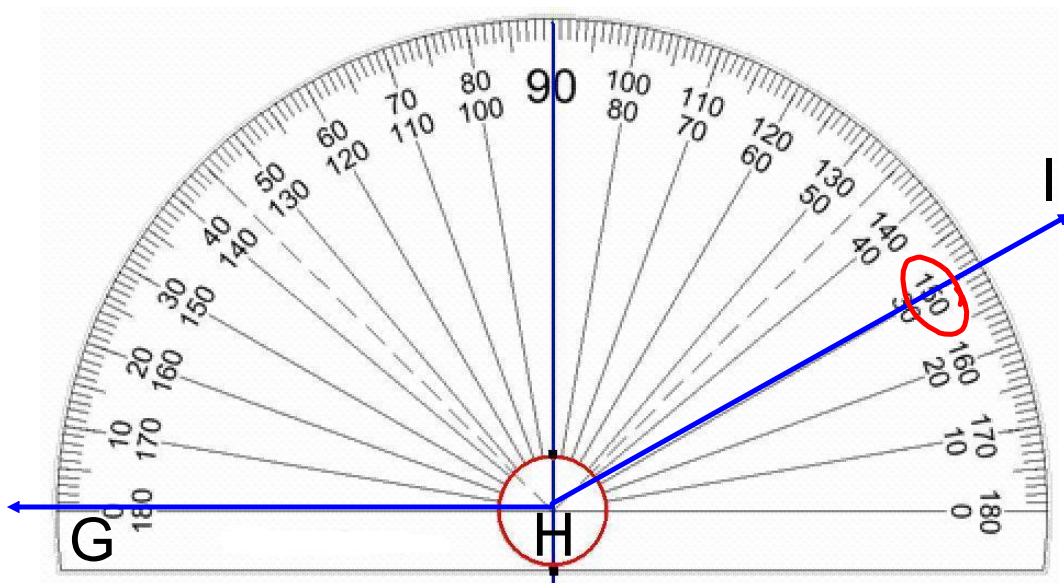
45°



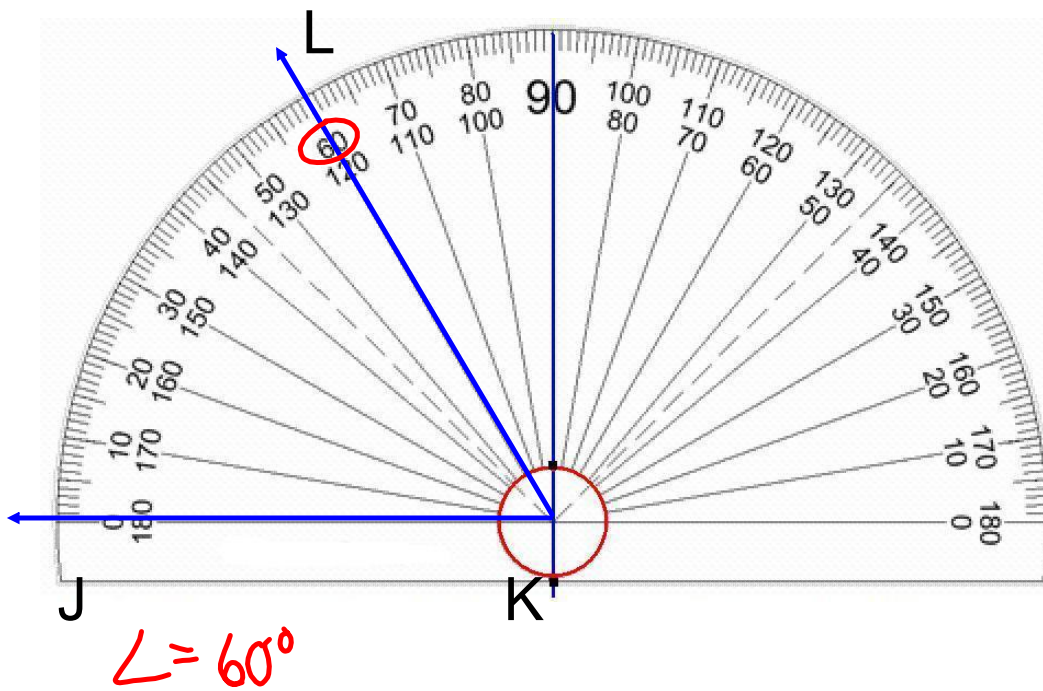
$$\angle = 110^\circ$$

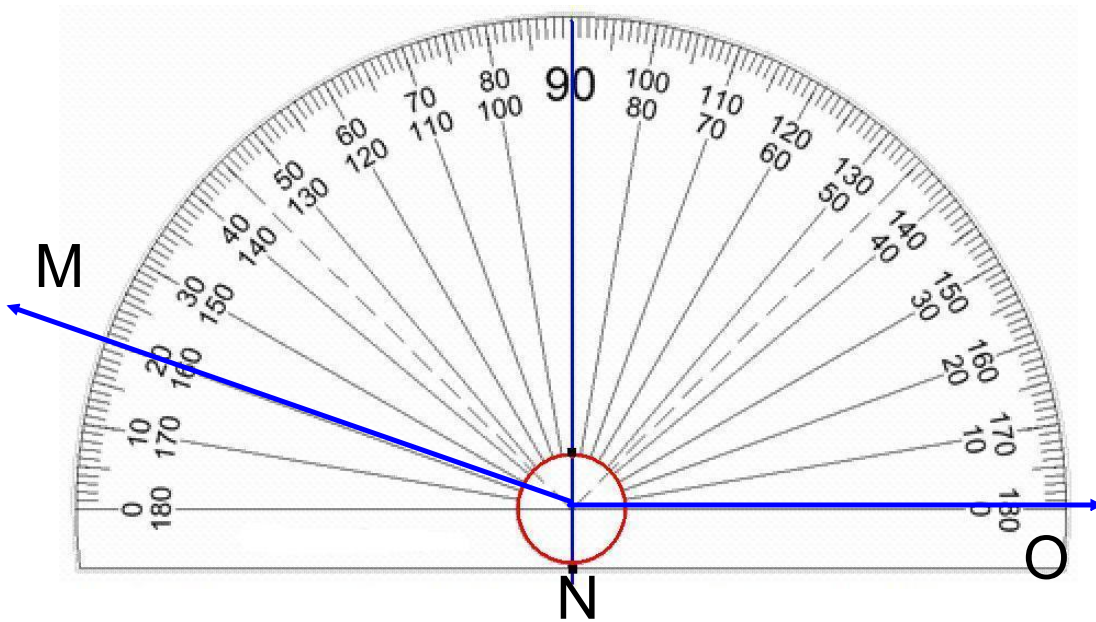


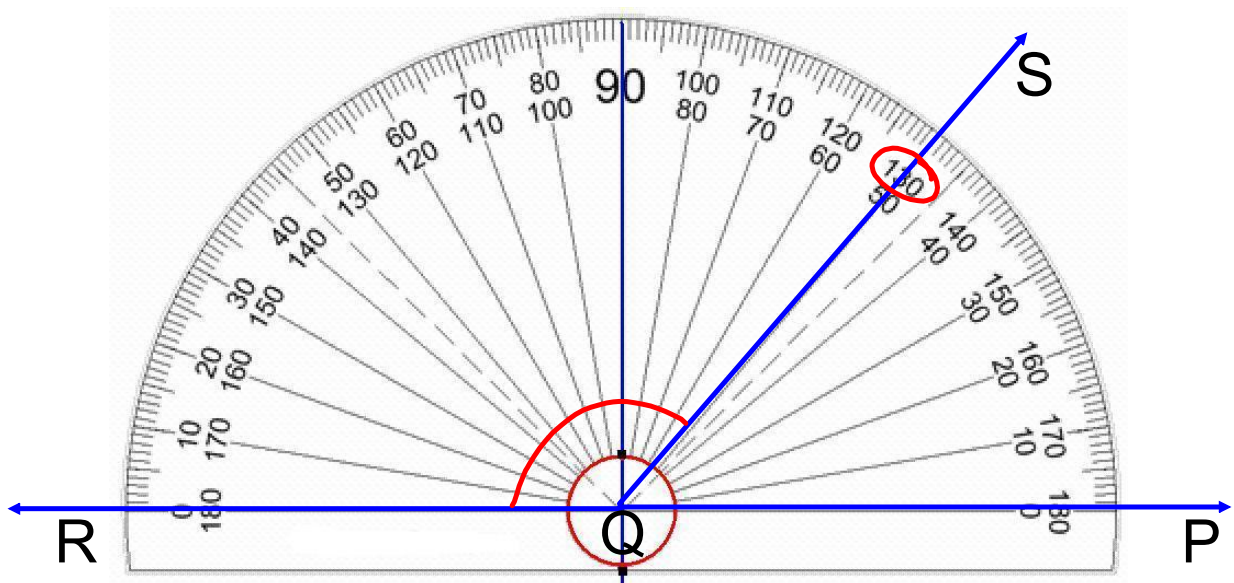
$$\angle = 30^\circ$$



$$\angle = 150^\circ$$

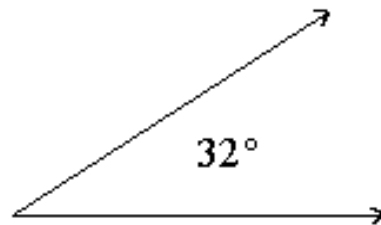
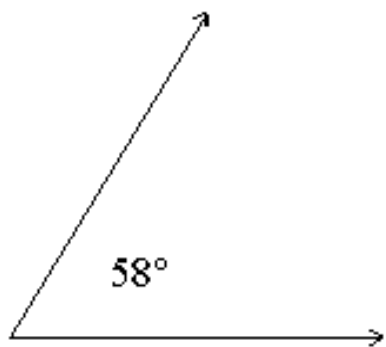






$$\angle SQP = 50^\circ$$
$$\angle RQP = 180^\circ$$
$$\angle RQS = 130^\circ$$

These two angles are complementary.

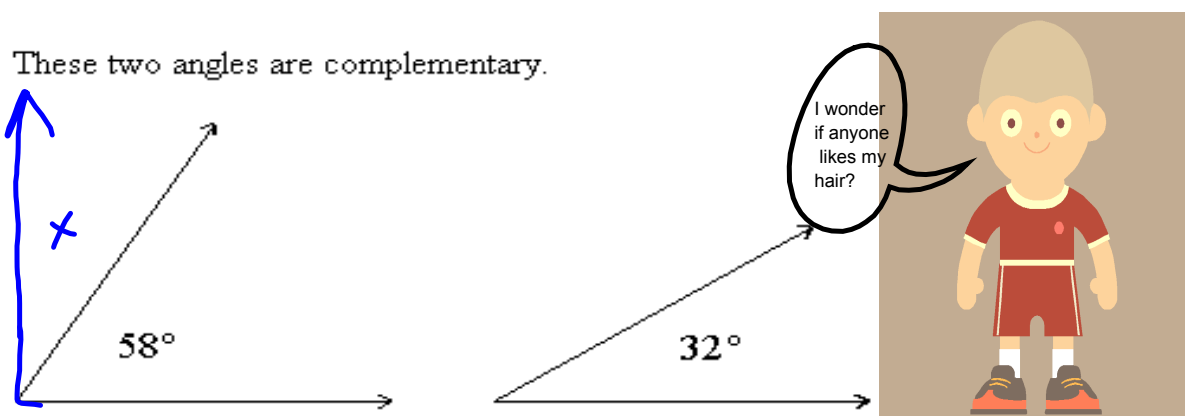


Hi,
You are
looking
GOOD!

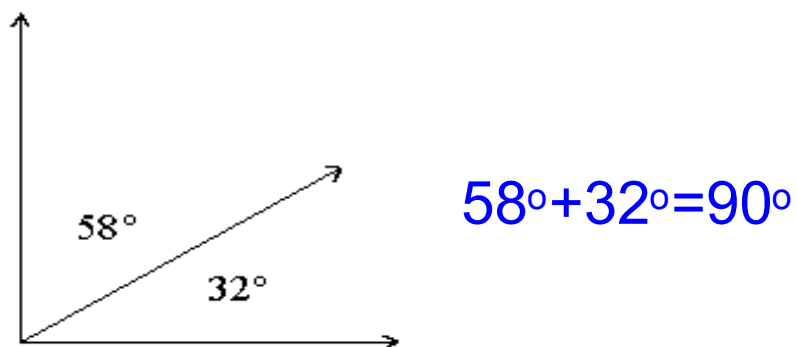
Why?



What a nice **"complement"**.

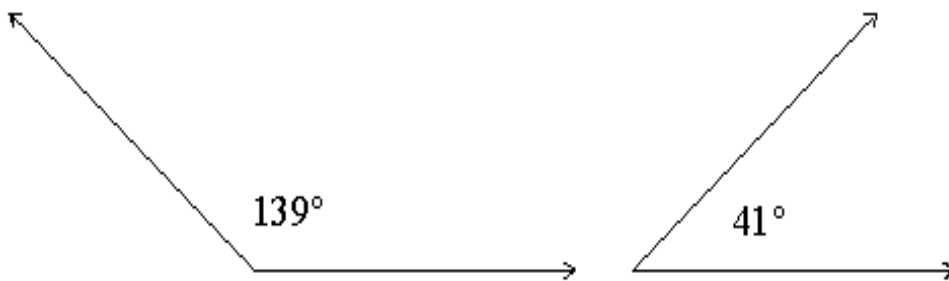


Note that these two angles can be "pasted" together to form a right angle!



Complementary angles add up to **90°**.

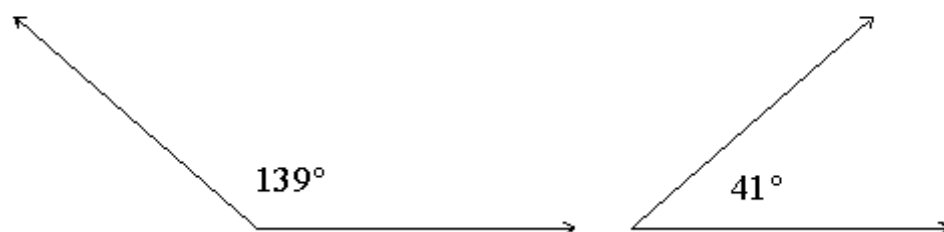
These two angles are supplementary.



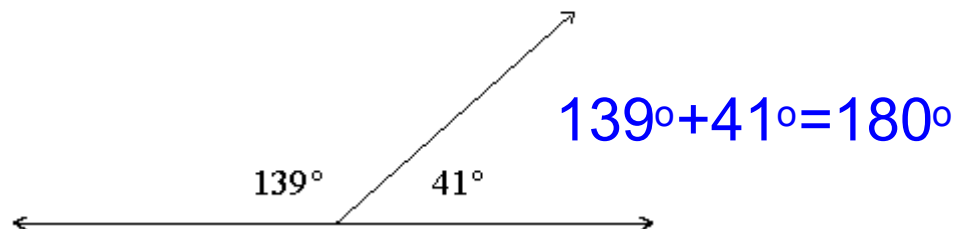
Why?



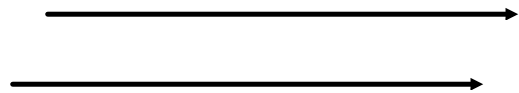
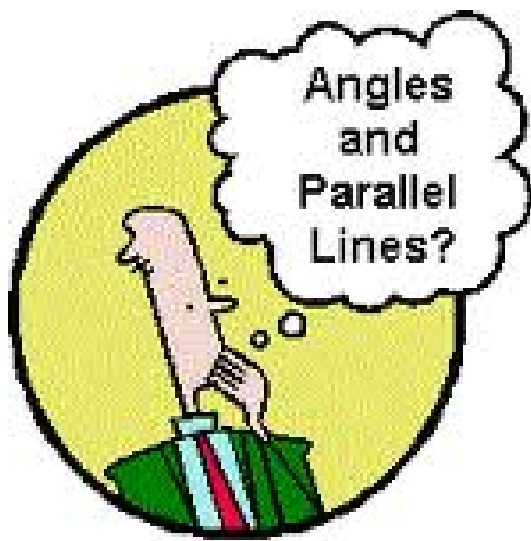
These two angles are supplementary.

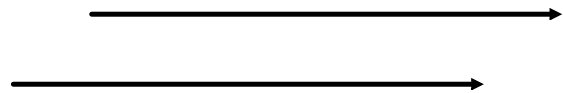
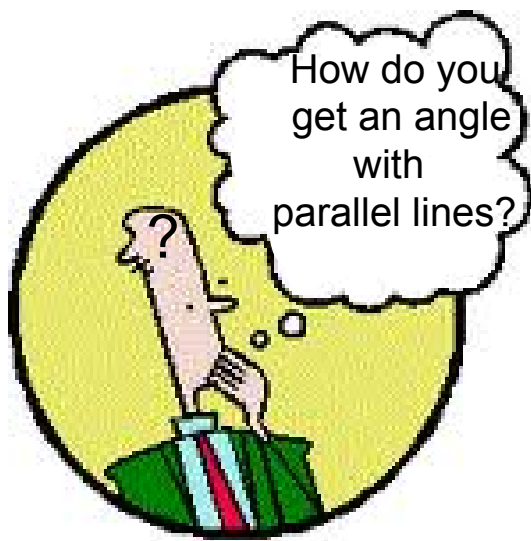


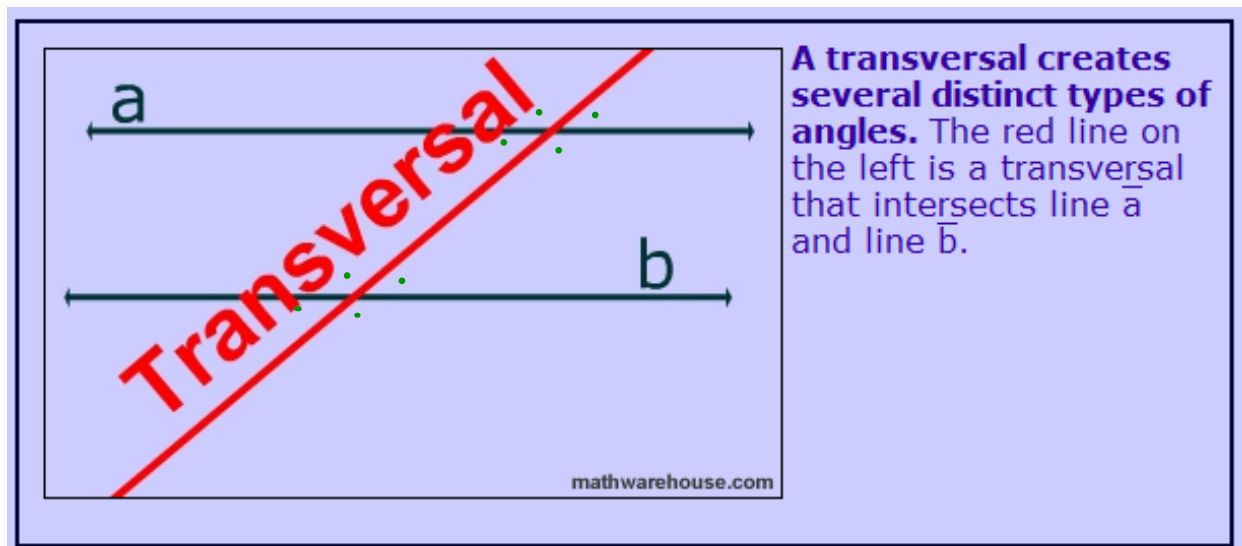
Note that these two angles can be "pasted" together to form a straight line!



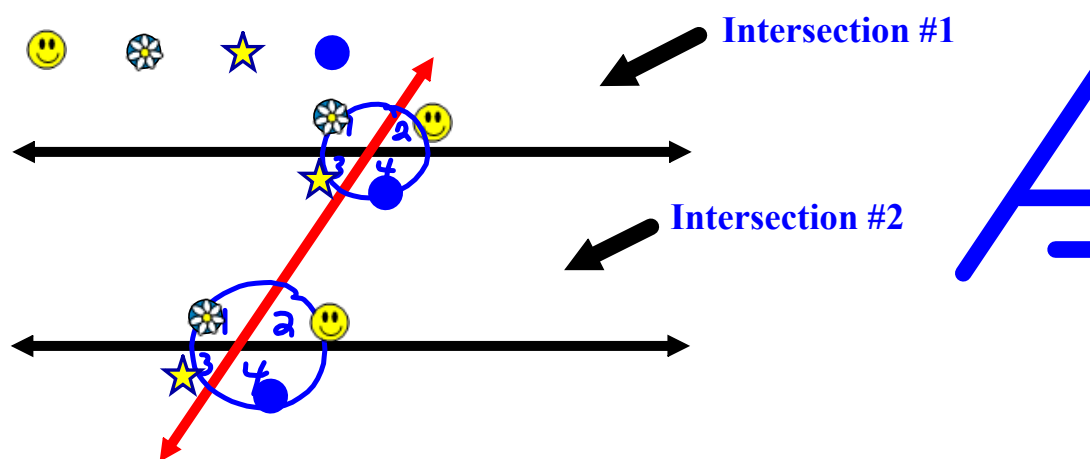
Supplementary angles add up to 180° .





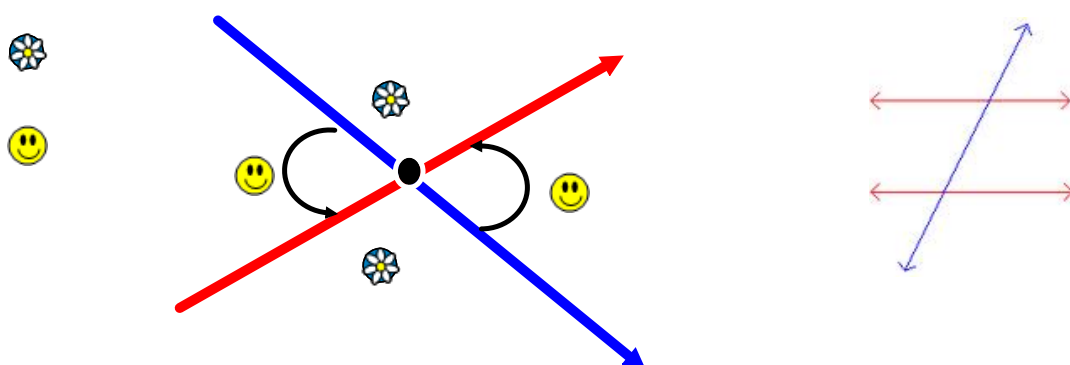


Corresponding Angles (F Rule)



Angles that occupy
the same relative position in
two different intersections.

Vertically Opposite Angles (X Rule)

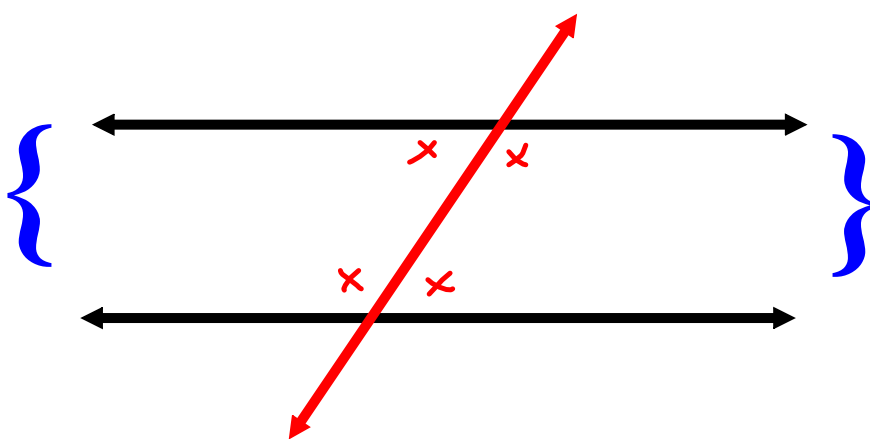


Only share a vertex!
thinking



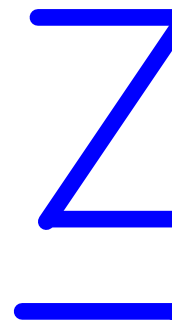
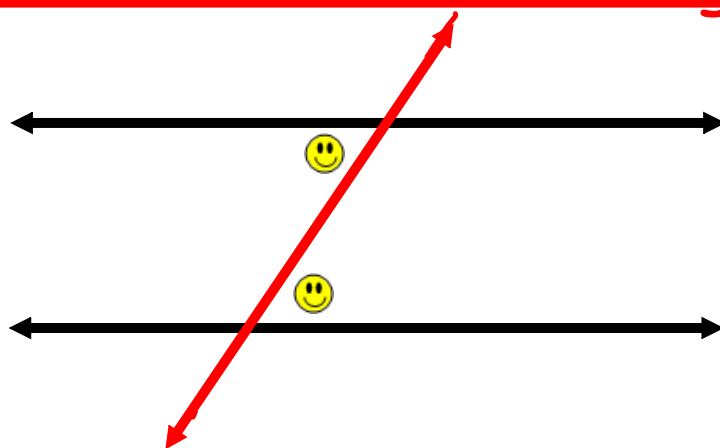
Vertically opposite
angles
are equal.

Interior Angles



Angles between
two main lines are
Interior Angles

Alternate Interior Angles (Z Rule)

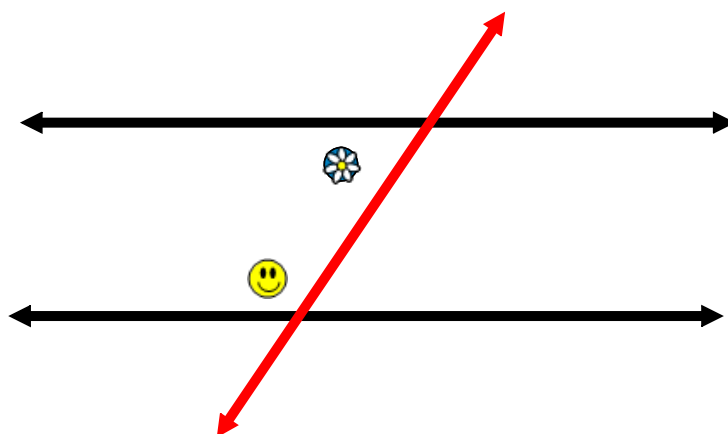


thinking



Alternate Interior
angles
are equal.

Co-Interior Angles - Same Side (C Rule)

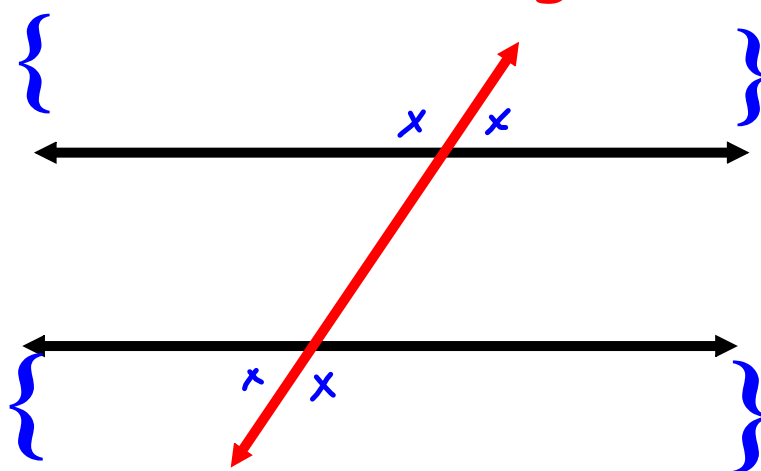


thinking



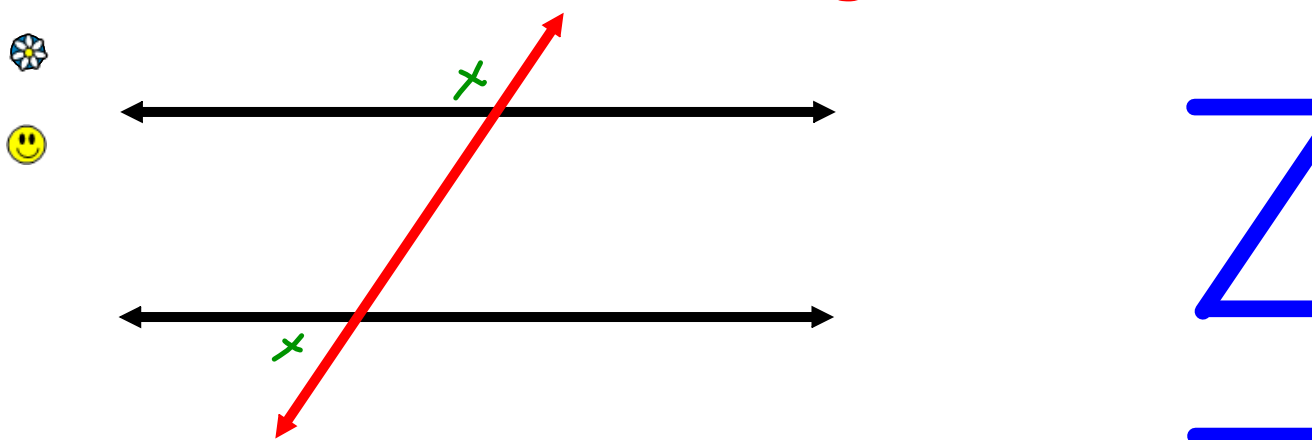
Interior angles (same side) add to 180° .

Exterior Angles



Angles outside the
two main lines are
Exterior Angles

Alternate Exterior Angles (Z Rule)

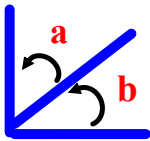


thinking



Alternate Exterior
angles
are equal.

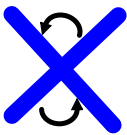
Let's Sum It Up



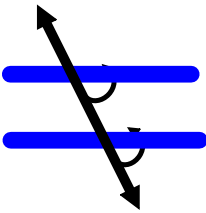
Rule - **Complimentary angles** a & b add up to 90°



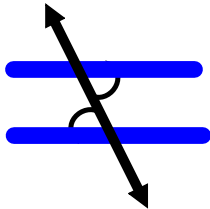
Rule - **Supplementary angles** a & b add up to 180°



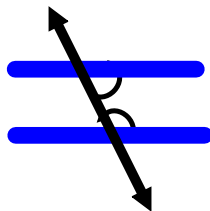
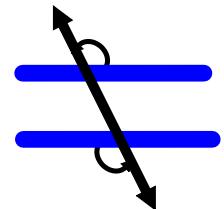
Rule - **Vertically Opposite angles** are equal



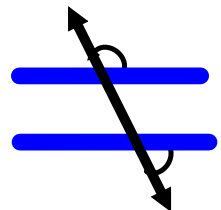
Rule - **Corresponding angles** are equal

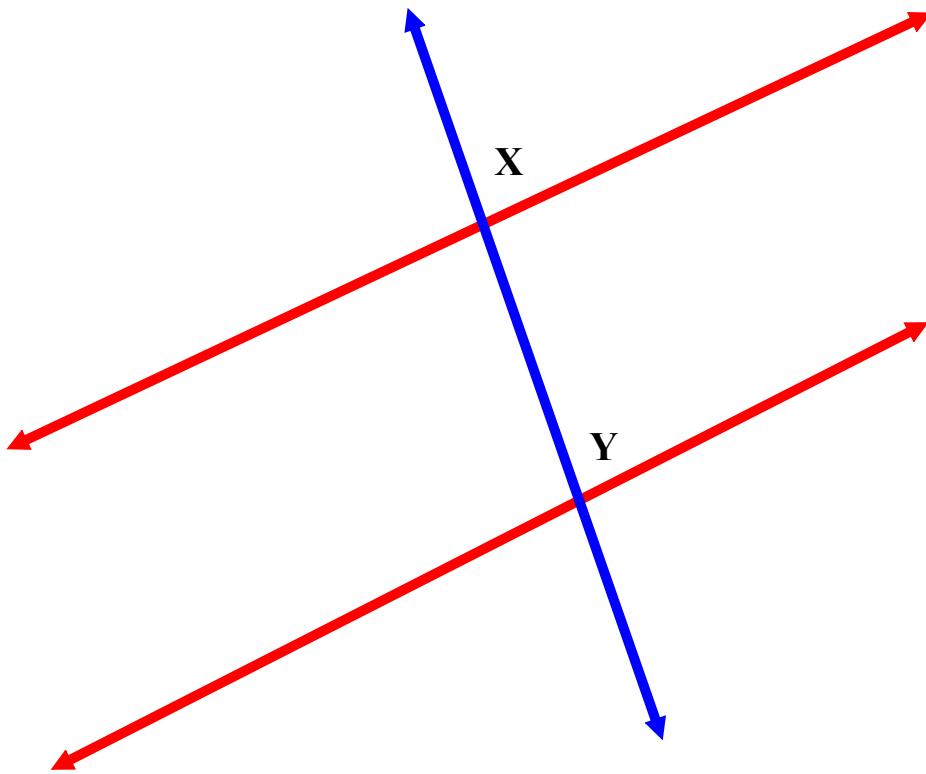


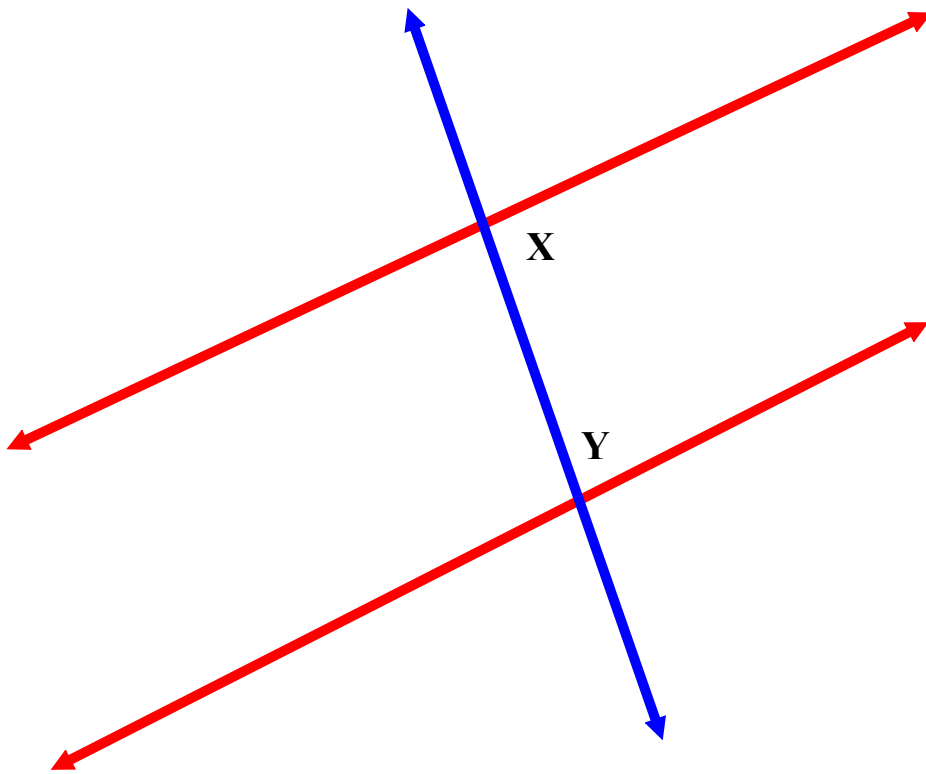
Rule - **Alternate Interior angles** are equal
Alternate Exterior angles are equal

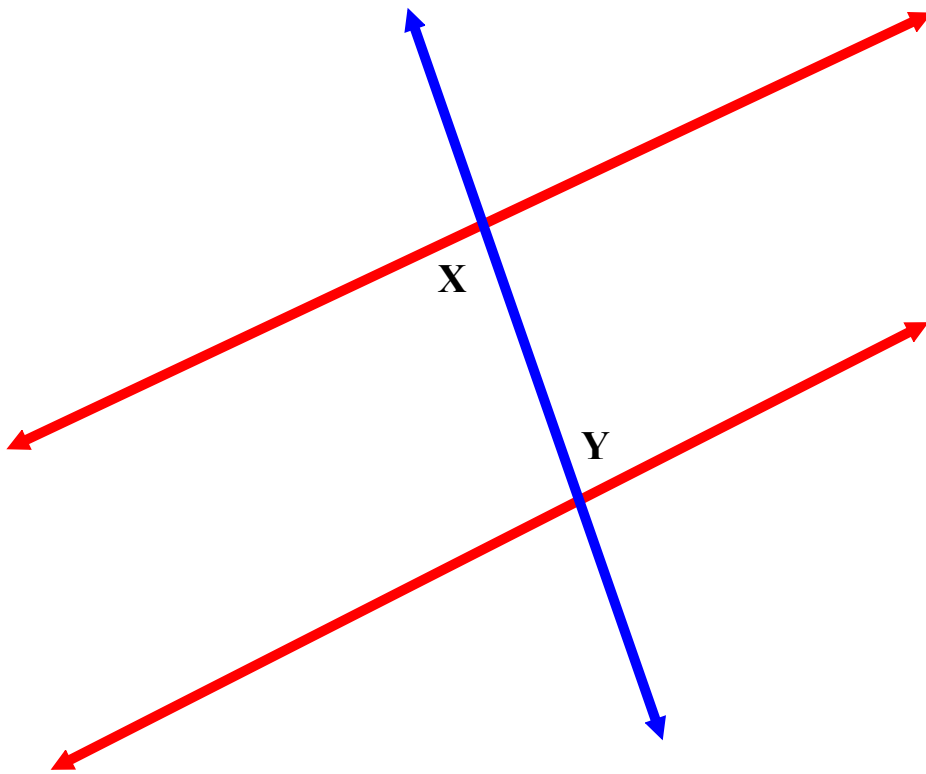


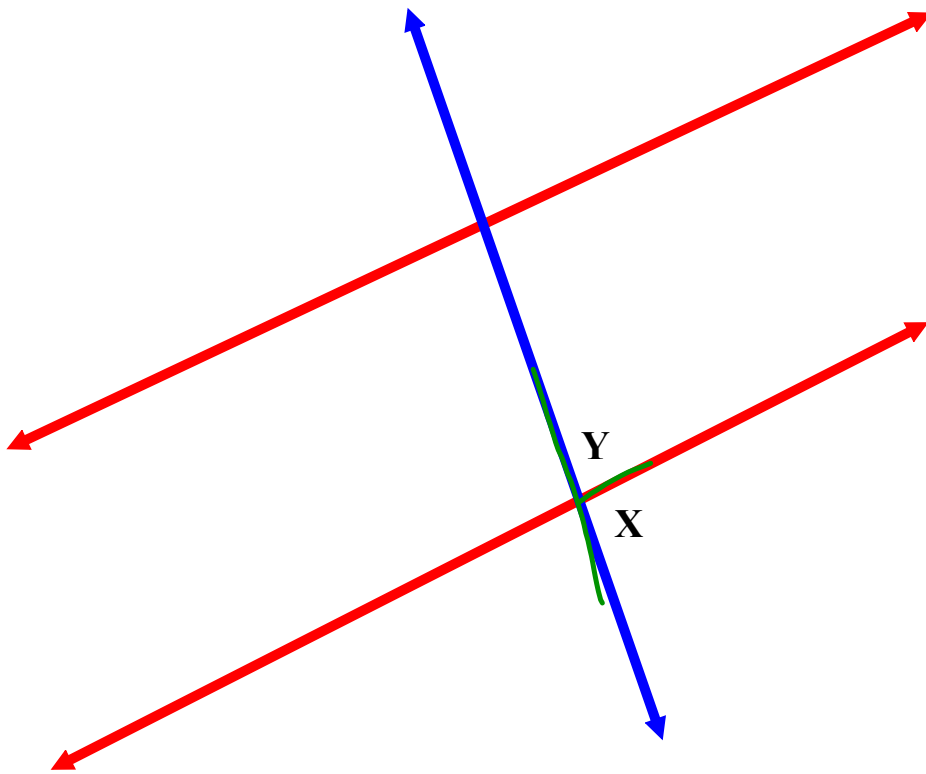
Rule - **Co-interior angles** add up to 180°
Co-Exterior angles add up to 180°

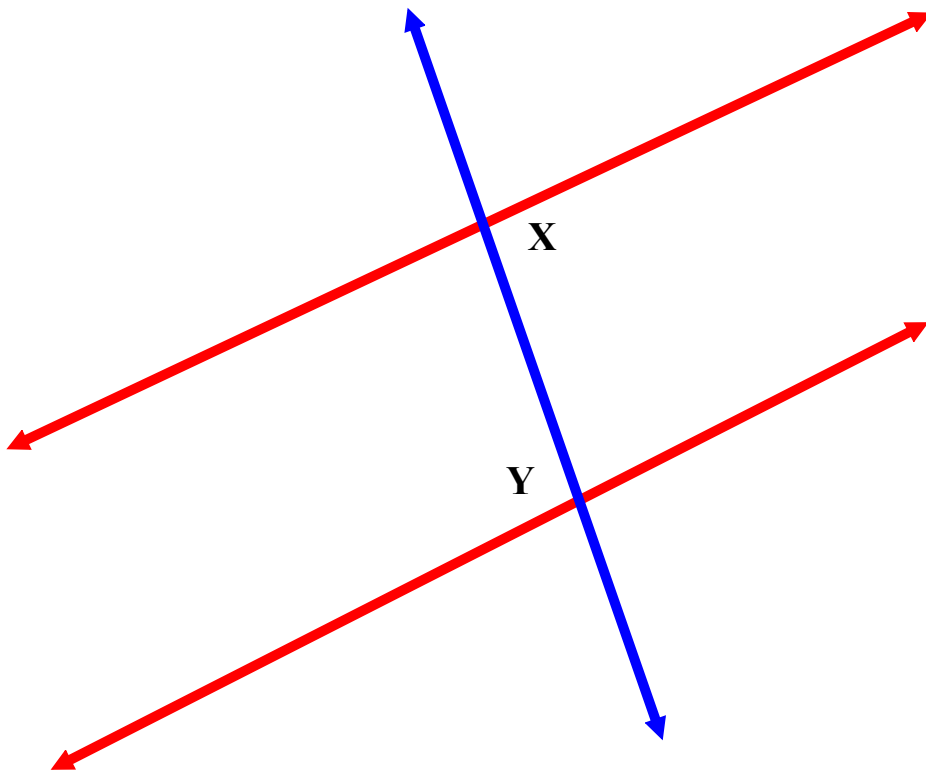


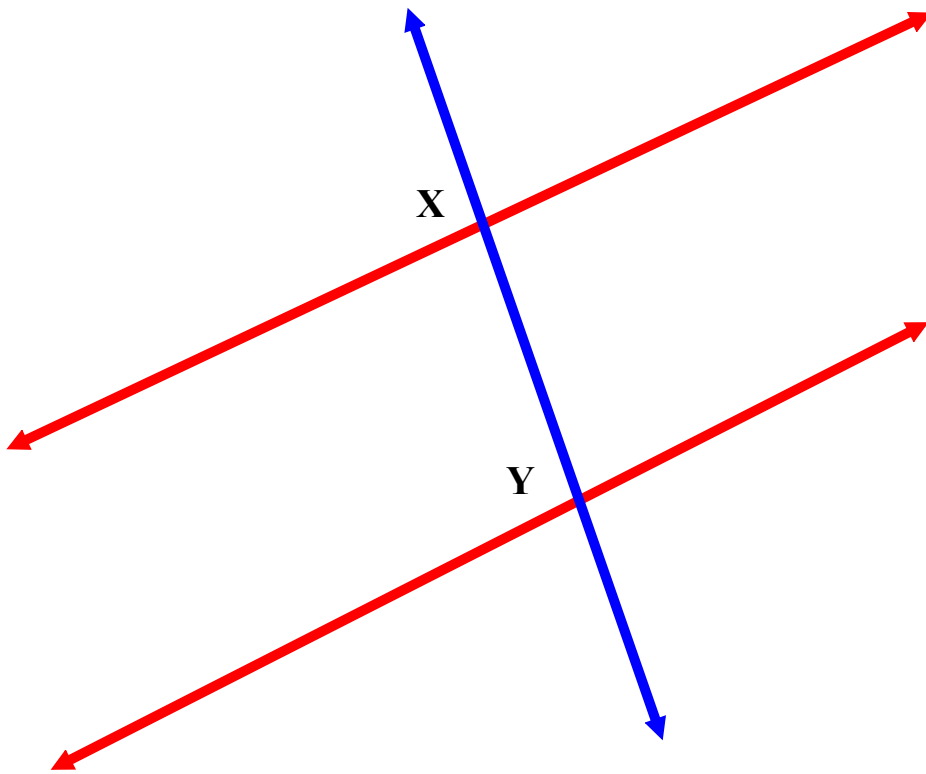


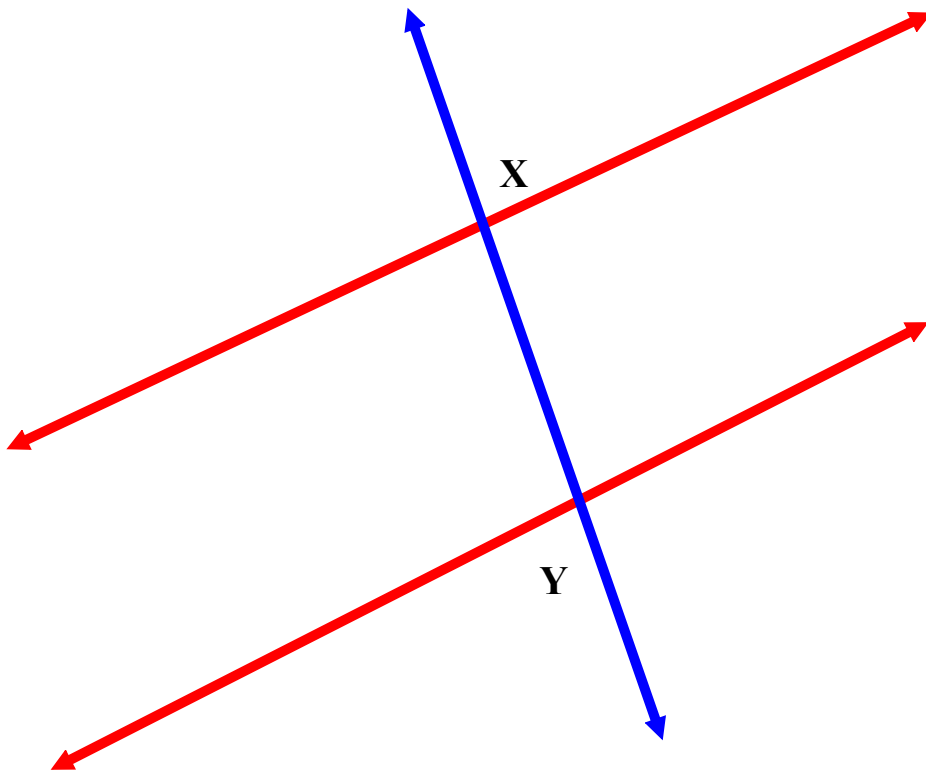


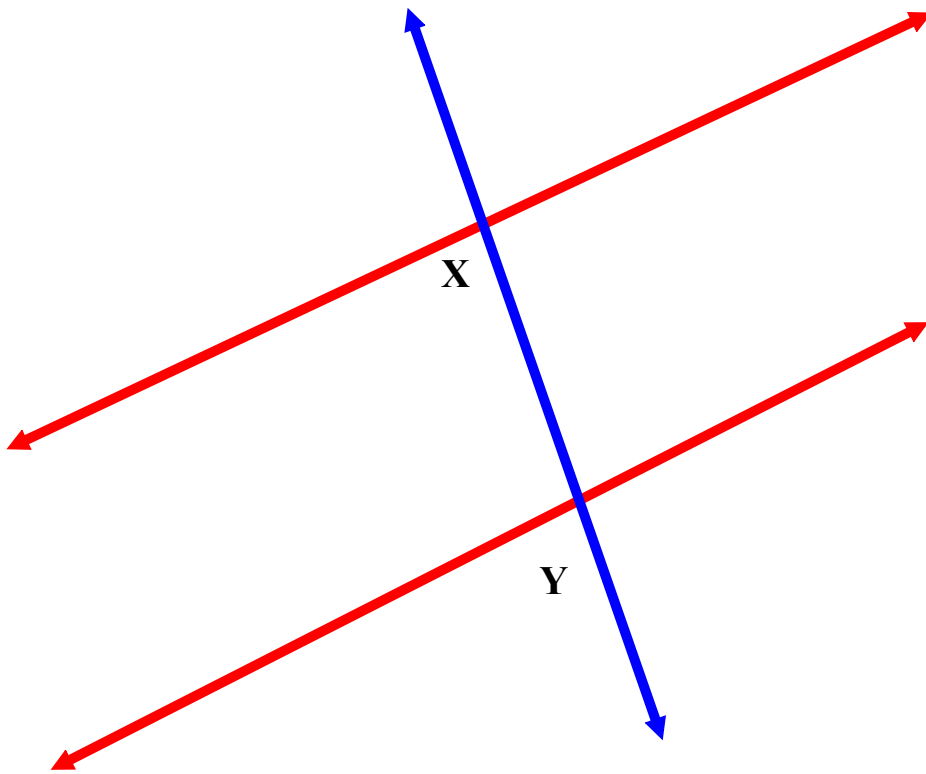


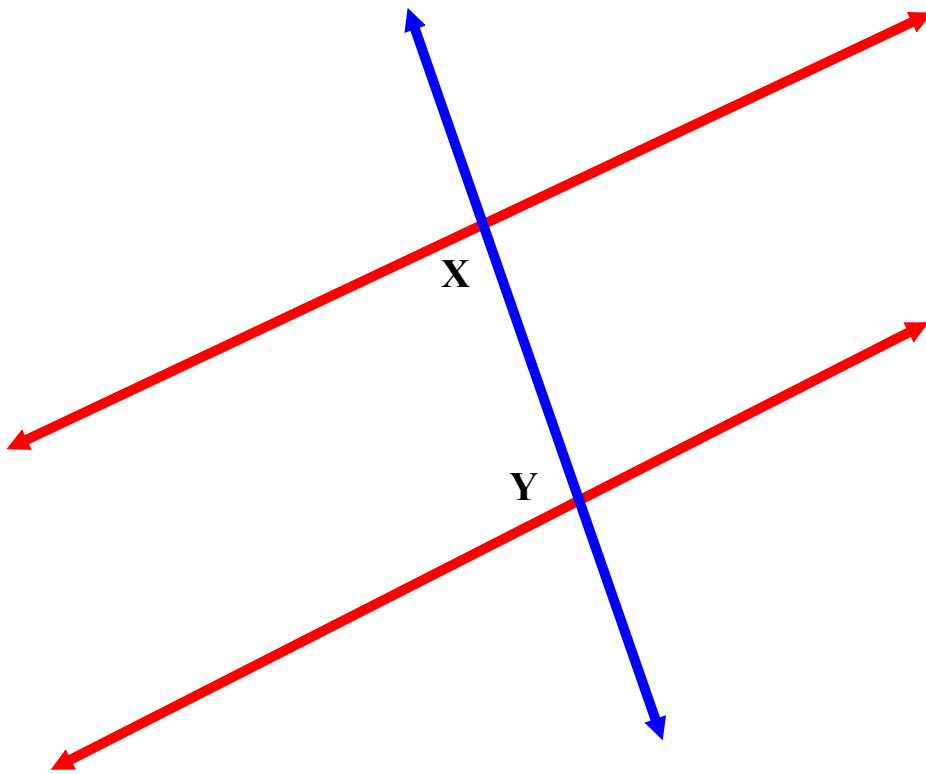


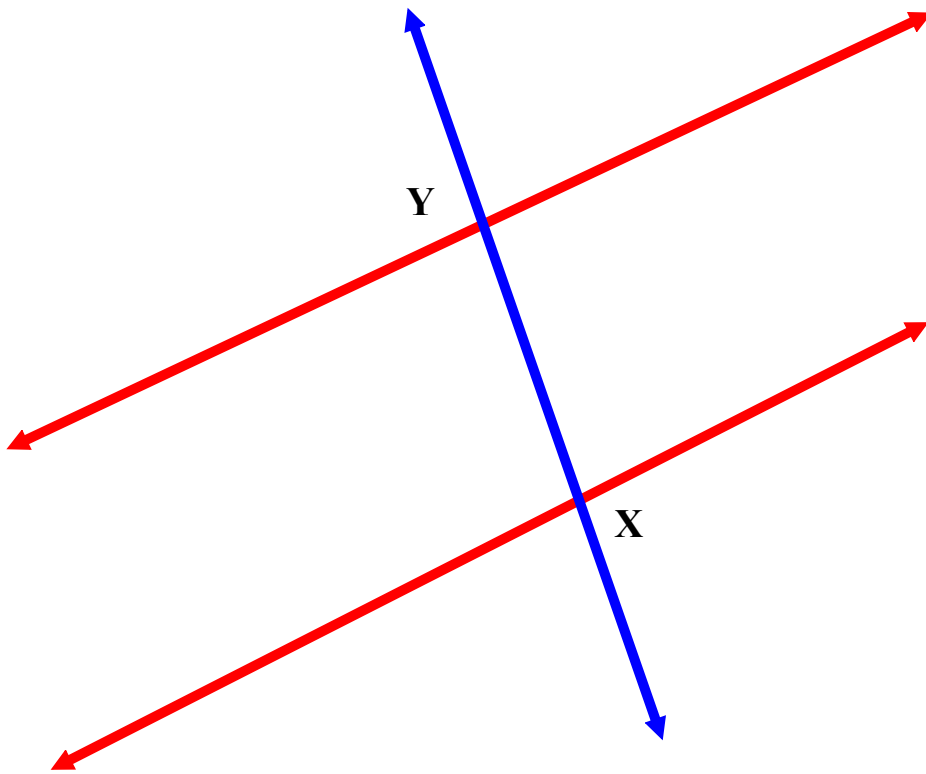




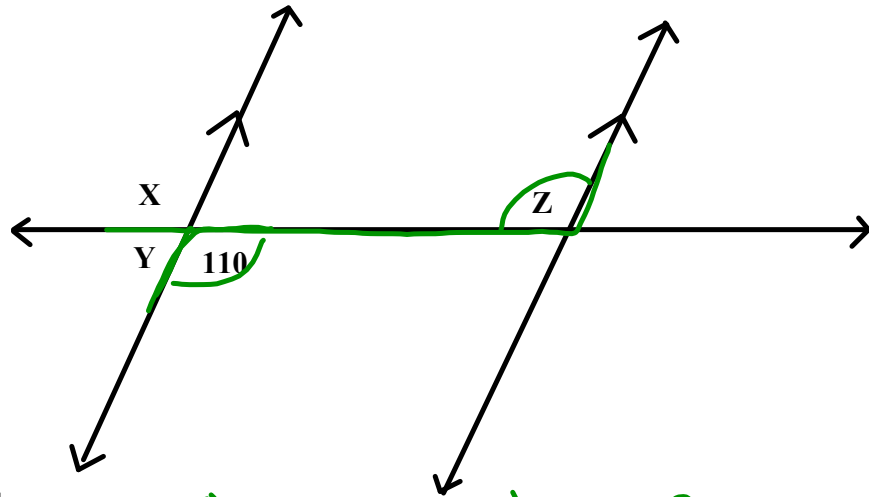




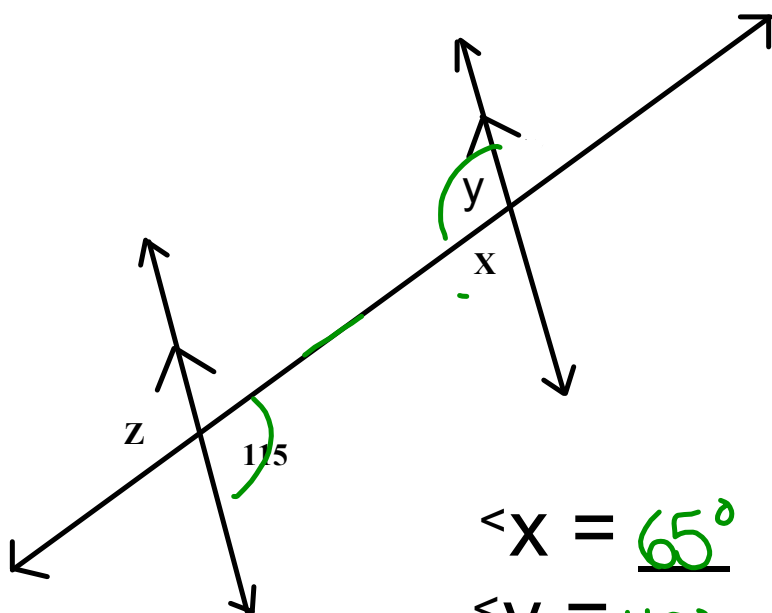




Using 110° as your reference, determine the value of each unknown angle, and give the reason.



$$\begin{aligned} \angle X &= \underline{110^\circ} && \underline{\text{opposite angle}} \\ \angle Y &= \underline{70^\circ} && \underline{\text{Suppl.}} \\ \angle Z &= \underline{110^\circ} && \underline{\text{Alt. Int.}} \end{aligned}$$



$$\angle x = 65^\circ$$

Co-Int.

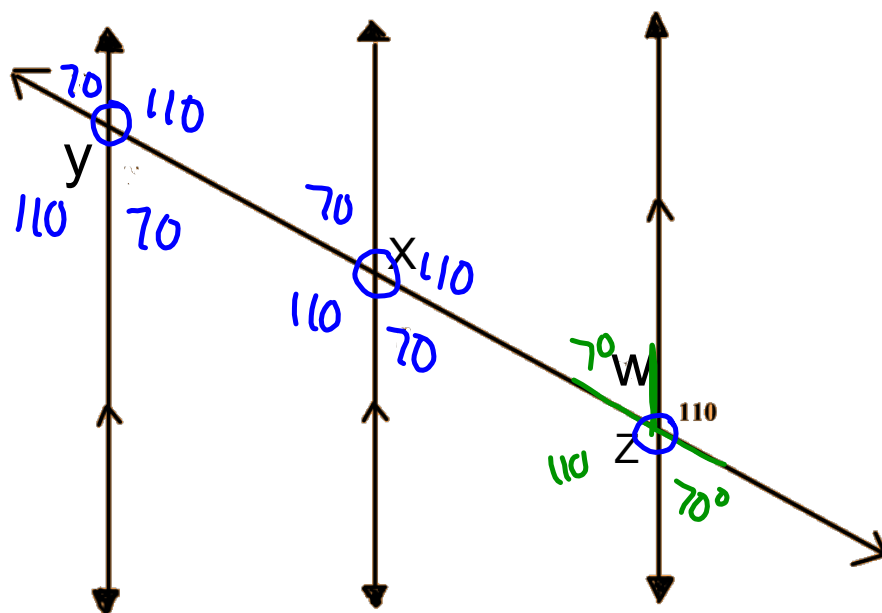
$$\angle y = 115^\circ$$

Alt-Int.

$$\angle z = 115^\circ$$

Opposite Angle.

Using 115° as your reference, determine the value of each unknown angle, and give the reason.



$$w = \underline{70^\circ} \quad x = \underline{110^\circ}$$
$$y = \underline{110^\circ} \quad z = \underline{110^\circ}$$

