Angles and lines Geometry Research Honors

Exercises 1–12

In the figures below, \overline{AB} , \overline{CD} , and \overline{EF} are straight-line segments. Find the measure of each marked angle or find the unknown numbers labeled by the variables in the diagrams. Give reasons for your calculations. Show all the steps to your solutions.

1.



For Problems 6–12, find the values of x and y. Show all work.











12.

10.





In each exercise below, find the unknown (labeled) angles. Give reasons for your solutions.



m∠a =_____ m∠b =_____ m∠*c* =_____ m∠d =_____ m∠*e* =_____ m∠*f* =_____ m∠g =_____ m∠*h* = _____

m∠*i* =_____









m∠j =_____

m∠k =_____

m∠*m*=_____

m∠n =_____

m∠*p* =_____

m∠q =_____

m∠*r* =_____

Find the unknown (labeled) angles. Give reasons for your solutions.

