

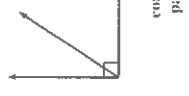


# METHODS AND MEANINGS

## Angle Relationships

If two angles have measures that add up to  $90^\circ$ , they are called **complementary angles**.

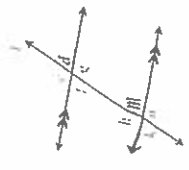
If two angles have measures that add up to  $180^\circ$ , they are called **supplementary angles**.



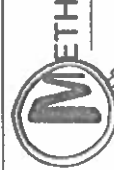
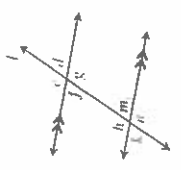
**Vertical angles** are the two opposite angles formed by a pair of intersecting lines, such as angles  $\angle c$  and  $\angle g$  in the diagram at right. Vertical angles always have equal measure.



When a line, called a **transversal** (line  $l$ ), crosses two parallel lines, then the **corresponding angles** are equal. For example, in the diagram at right,  $\angle m$  and  $\angle f$  form a pair of equal corresponding angles.



When a transversal (line  $l$ ) crosses two parallel lines, then the **alternate interior angles** are equal. For example, in the diagram at right,  $\angle m$  and  $\angle f$  form a pair of alternate interior angles that are equal.



# METHODS AND MEANINGS

## Types of Angles

When trying to describe shapes, it is convenient to classify types of angles. An angle is formed by two rays joined at a common endpoint, called a vertex. The measure of an angle represents the number of degrees of rotation from one ray to the other about the vertex. This course will use the following terms to refer to angles:



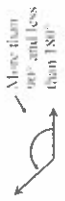
**acute angle:** Any angle with measure *between* (but not including)  $0^\circ$  and  $90^\circ$ .



**right angle:** Any angle that measures  $90^\circ$ .



**obtuse angle:** Any angle with measure *between* (but not including)  $90^\circ$  and  $180^\circ$ .



**straight angle:** Straight angles have a measure of  $180^\circ$  and are formed when the sides of the angle form a straight line.



**circular angle:** Any angle that measures  $360^\circ$ .

