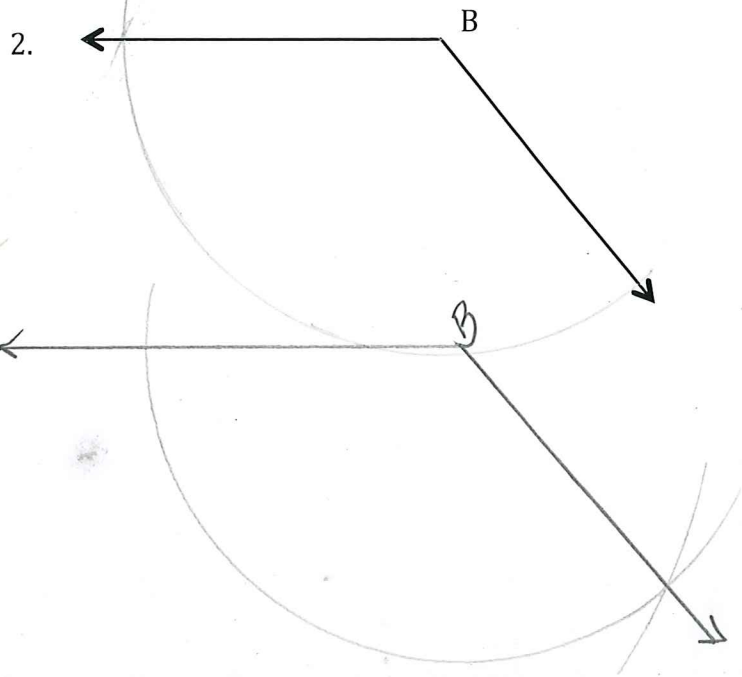
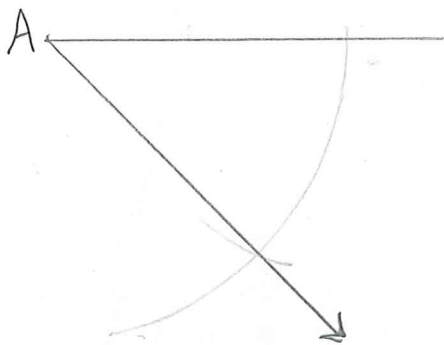
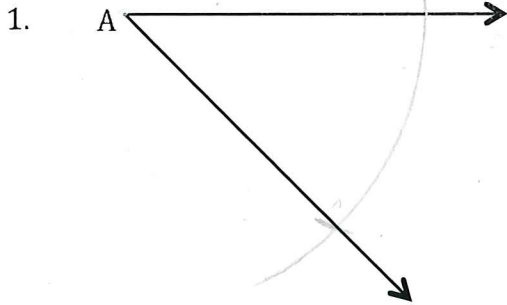


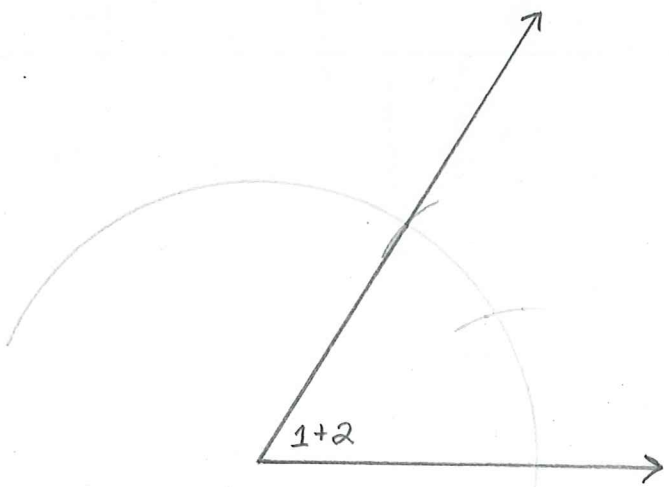
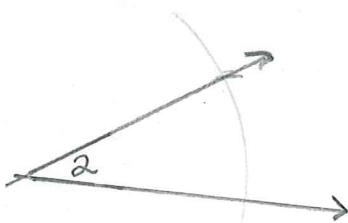
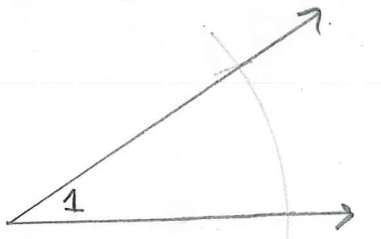
# Geometry 1.4 Worksheet Angles and More

Name KEY

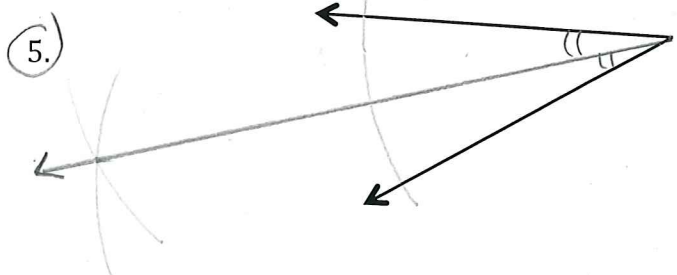
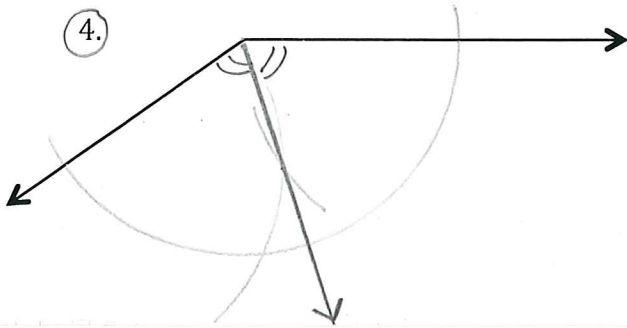
Use a compass and straightedge to duplicate each angle shown below. Be sure to label and mark the duplicate angle.



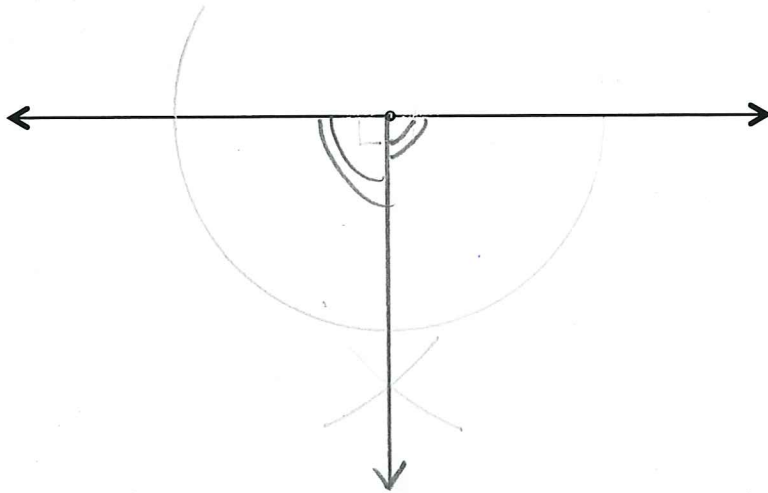
3. Draw two acute angles. Use your compass and straightedge to construct an angle with a measure equal to the sum of the measures of the first two angles. NO PROTRACTOR!



Use a compass and straightedge to bisect each angle shown below. Be sure to label and mark the construction.

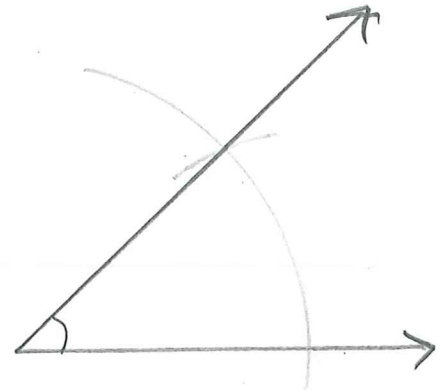
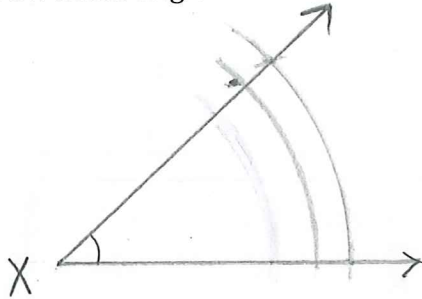


6.



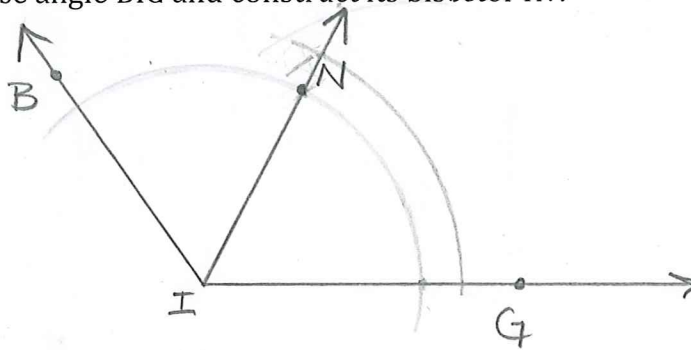
7.

Draw acute angle X and construct its duplicate.



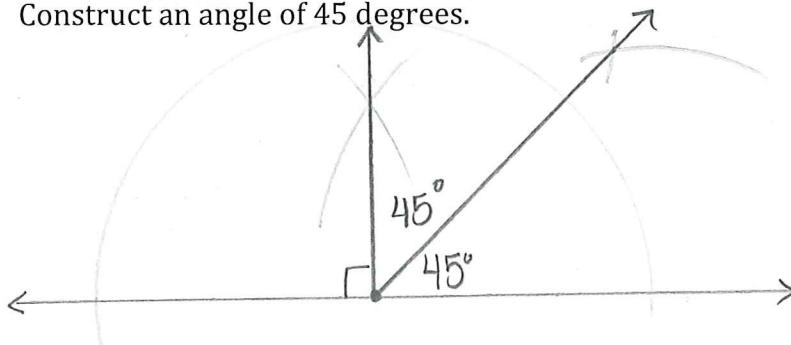
8.

Draw obtuse angle BIG and construct its bisector  $\overline{IN}$ .



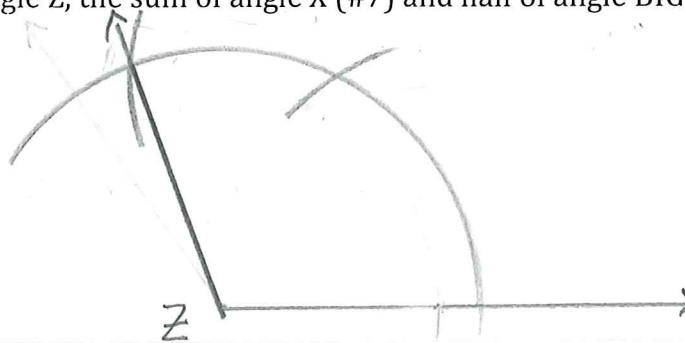
9.

Construct an angle of 45 degrees.



10.

Construct angle Z, the sum of angle X (#7) and half of angle BIG (#8).

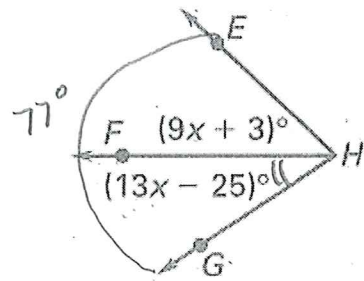


11. Given  $m\angle EHG = 77^\circ$ , find  $m\angle FHG$ .

$$9x + 3 + 13x - 25 = 77$$

$$22x - 22 = 77$$

$$22x = \frac{99}{22} \quad x = 4.5$$



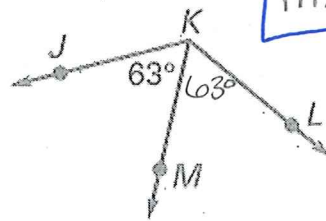
$$m\angle FHG = 13x - 25 = 13(4.5) - 25 = 58.5 - 25 = 33.5^\circ$$

12.  $\overline{KM}$  bisects  $\angle JKL$ . Find  $m\angle MKL$  and  $m\angle LKJ$ .

$$m\angle MKL = 63^\circ$$

$$m\angle LKJ = 126^\circ$$

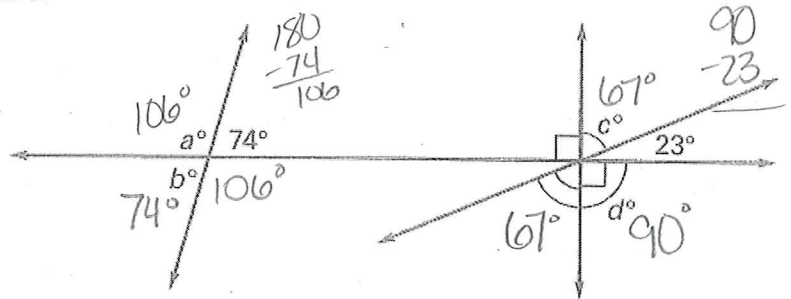
$$\begin{array}{r} 63 \\ 63 \\ \hline 126 \end{array}$$



$$m\angle FHG = 33.5^\circ$$

13. Find the indicated angle measure.

$$\begin{array}{l} a = 106^\circ \\ b = 74^\circ \\ c = 67^\circ \\ d = 157^\circ \end{array}$$

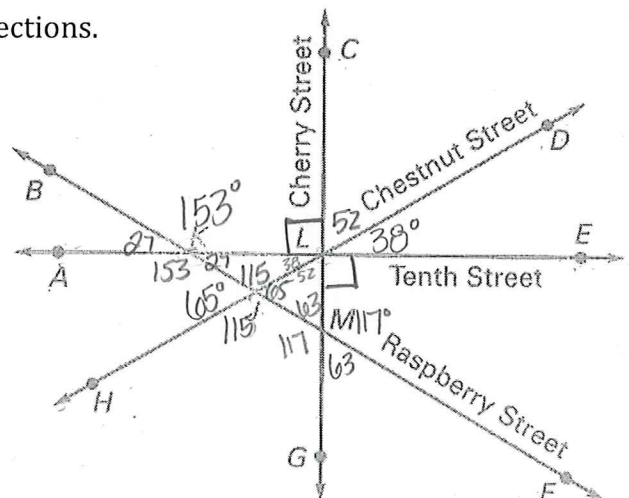


14. The diagram shows four streets and their intersections. All streets are straight and  $\overline{CG}$  bisects  $\angle ALE$ .

Name  $\Delta$  angles for each:

- a. Which angles are acute? Obtuse? Right?

A	O	R
$\angle AKB$	$\angle AKJ$	$\angle CLK$
$\angle LKJ$	$\angle LKB$	$\angle ELM$
$\angle KJH$	$\angle KJL$	$\angle ELC$
$\angle LJM$	$\angle HJM$	$\angle ALG$



- b. If  $m\angle DLE = 38^\circ$ ,  $m\angle BKE = 153^\circ$ ,  $m\angle BJH = 65^\circ$ , and  $m\angle CMF = 117^\circ$ , Find...

$$m\angle CLD = 52^\circ$$

$$m\angle FJH = 115^\circ$$

$$m\angle DJF = 65^\circ$$

$$m\angle EKF = 27^\circ$$

$$m\angle FMG = 63^\circ$$

$$m\angle DLJ = 180^\circ$$

May Vary