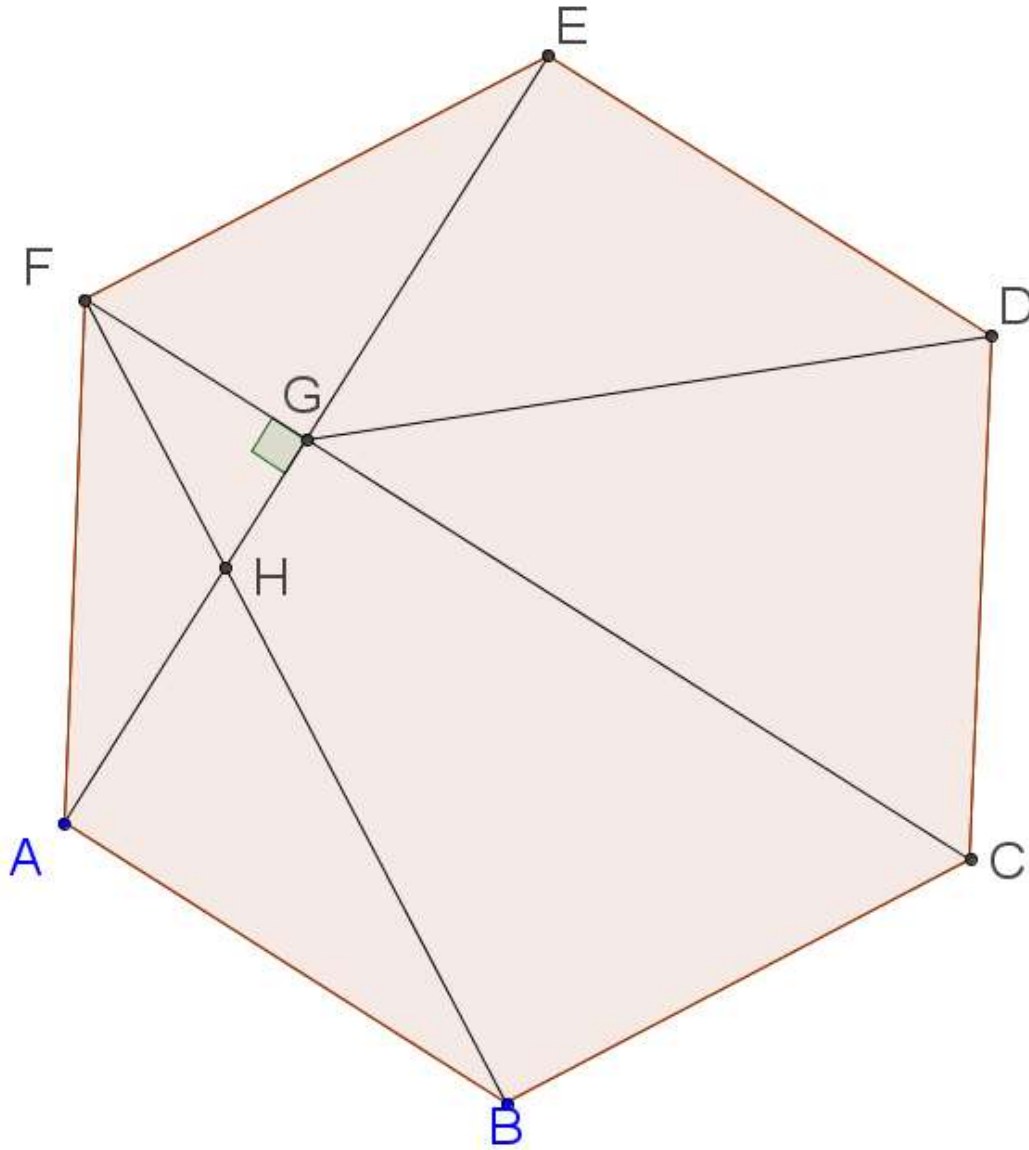


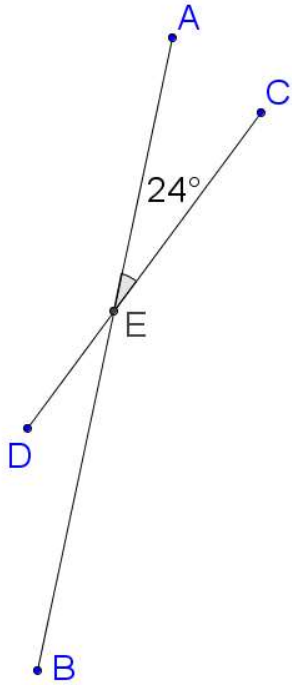
7.4a Homework: Special Angle Relationships

1. Find at least one example of each angle relationship in the diagram. Name the angle pairs below, and highlight the pairs of angles in the diagram, using a different color for each relationship.

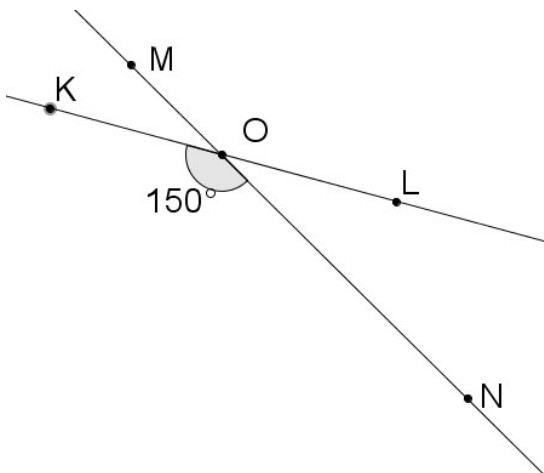


- a) Vertical angles
- b) Supplementary angles
- c) Complementary angles

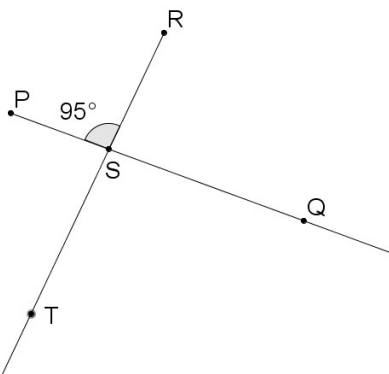
2. For each figure of two intersecting lines, calculate the three missing measures, justifying your answer.



Angle	Measure of angle	Justification
$\angle CEB$		
$\angle DEA$		
$\angle BED$		

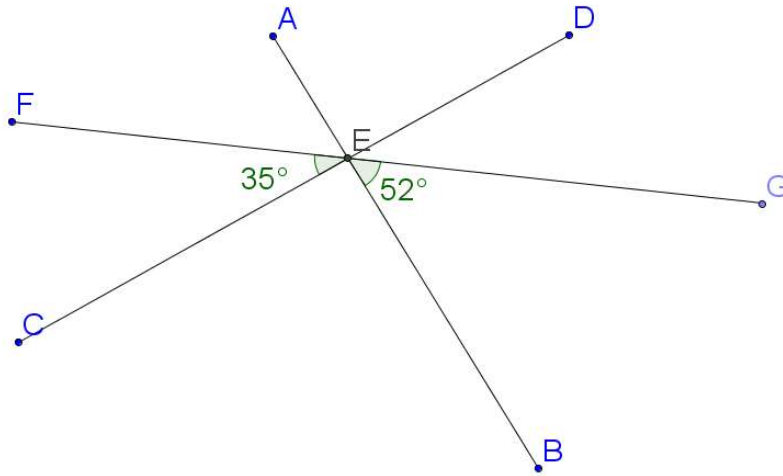


Angle	Measure of angle	Justification
$\angle LOM$		
$\angle MOK$		
$\angle NOL$		



Angle	Measure of angle	Justification
$\angle PST$		
$\angle RSQ$		
$\angle QST$		

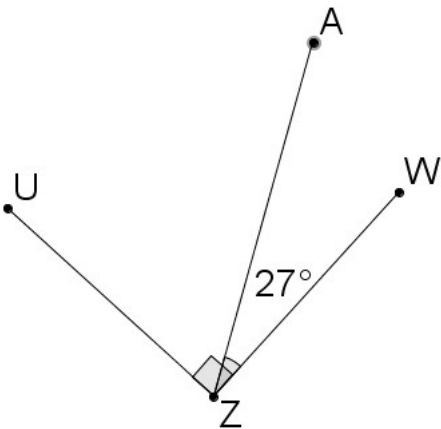
3. For the figure formed by three intersecting lines, calculate the four missing measures, justifying your answer.



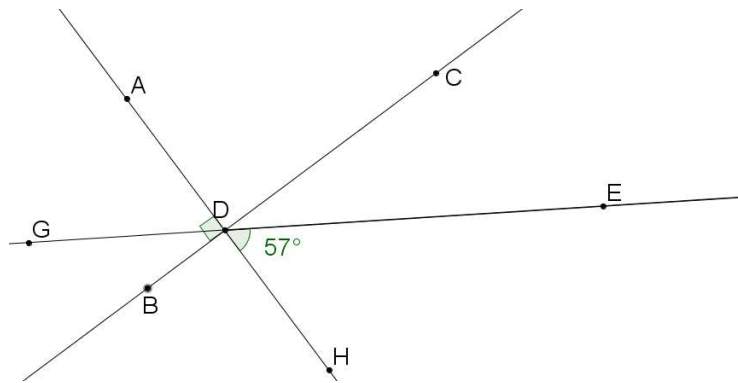
Angle	$\angle AEF$	$\angle AEC$	$\angle AED$	$\angle DEG$	$\angle CEB$	$\angle FEG$
Measure	52°					
Justification	Vertical to $\angle GEB$					

4. Refer to the figure below.

$m\angle AZU =$ because



5. Fill in the missing angle measurements in the table, and give a justification for each measurement.



Angle	$\angle ADG$	$\angle GDB$	$\angle BDH$	$\angle CDH$	$\angle CDE$	$\angle CDA$
Measure	57°					
Justification	Vertical to $\angle EDH$					

For #6-8, draw a diagram to illustrate the situation, and then choose the correct answer.

6. If $\angle G$ is complementary to $\angle H$, and $m\angle H = 20^\circ$, then $\angle G$ must be:

- a. Obtuse
- b. Acute
- c. Right

7. If $\angle B$ is supplementary to $\angle C$, and $m\angle C = 90^\circ$, then $\angle B$ must be:

- d. Obtuse
- e. Acute
- f. Right

8. If $\angle D$ is vertical to $\angle E$, and $m\angle E = 115^\circ$, then $\angle D$ must be:

- g. Obtuse
- h. Acute
- i. Right