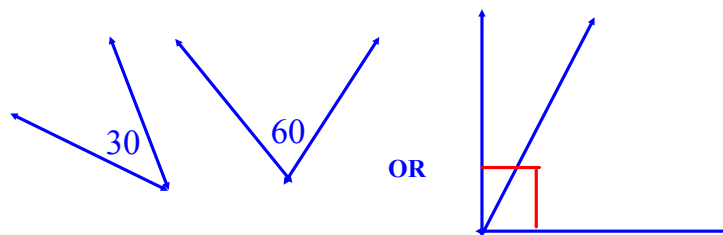# l - 5
Angle Relationships

Terminology
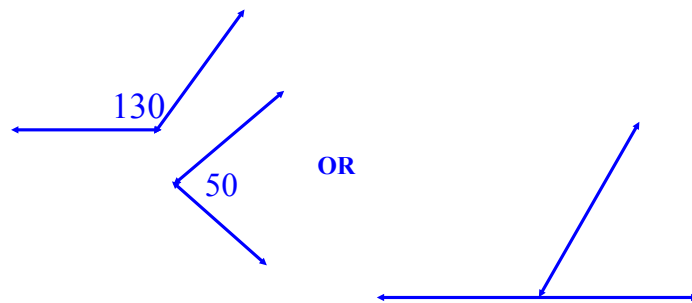
Complementary Angles
- Two angles whose sum is equal to 90 degrees

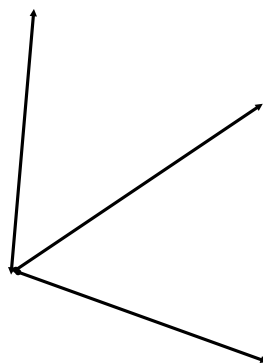30   60   **OR**

Supplementary Angles
- Two angles whose sum is equal to 180 degrees

130
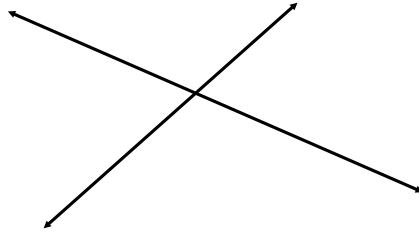
50   **OR**

Terminology

Adjacent Angles
- Two angles that share a side and have a
common vertex

<u>Vertical Angles</u>
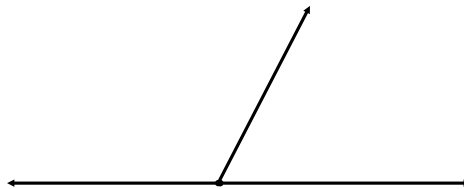- Two non-adjacent angles formed by intersecting lines
Always congruent

<u>Linear Pair</u>
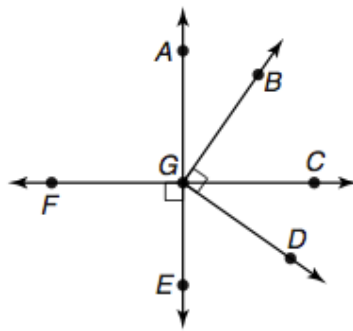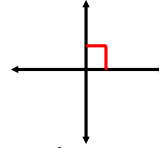- Two adjacent angles where the non-common side is an opposite ray.
Always Supplementary
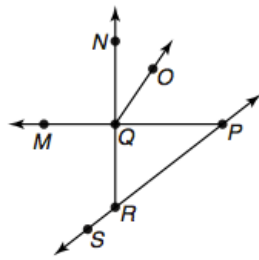
Terminology
Perpendicular Lines

($\perp$ *means perpendicular*)

- Two lines that intersect to form four right angles

- Two lines that intersect to form congruent adjacent angles

- Segments and rays can be perpendicular to lines or to other line segments or rays.

If $m\angle FGE = 5x + 10$, find x so that $\overleftrightarrow{FC} \perp \overleftrightarrow{AE}$.

If $m\angle BGC = 16x - 4$ and $m\angle CGD = 2x + 13$, find x so that $\angle BGD$ is a right angle.

Determine whether each statement can be assumed from the figure. Explain.

$\angle NQO$ and $\angle OQP$ are complementary.

$\angle SRQ$ and $\angle QRP$ is a linear pair.

$\angle MQN$ and $\angle MQR$ are vertical angles.