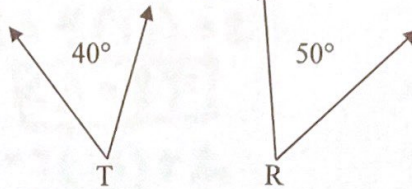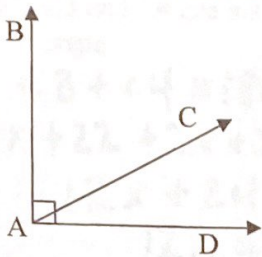# Perpendicular Lines, Complementary, Supplementary, and Right Angles
Practice #4 Day 1

Key

Two angles whose measures add up to 180° are called **Supplementary Angles**.

They can also be called a **linear pair** if together they form a straight angle.

Two angles whose measures add up to 90° are **Complementary Angles**.


In the diagram above, _____ and _____ are _____.

Use the figure on the right to name each of the following.

1. Name a pair of complementary angles.
   ∠LMQ and ∠QMP are compl.

2. Name a pair of supplementary angles.
   ∠PMQ and ∠QMN are suppl. etc...
   ∠LMN and ∠NMO are suppl. (there are many)

3. Name a different pair of supplementary angles.
   ∠QML and ∠QMO are suppl.
   ∠PMO and ∠OMN are suppl.

4. Name a linear pair.
   ∠PMQ and ∠QMN are also linear pairs

Find the measure of each angle

5. 56° **34°**

6. 56° **124°**

7. **90°**
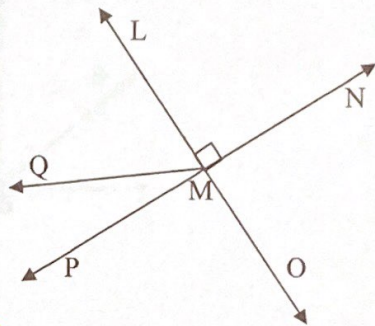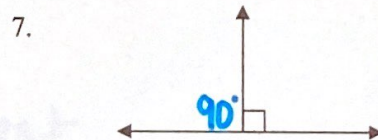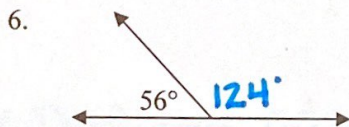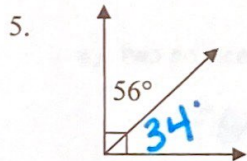
8. Find the measure of each angle in the diagram.

∠DAB is a right angle
∠ADE is a right angle
∠1 = 53°
m∠1 = m∠12
∠3 = 55°
∠5 = 88°
m∠4 = m∠9
∠ABE = 100°
∠DEB = 80°

∠1 = 53°   ∠11 = 80-53 = ∠11 = 27°
∠2 = 42+53=90° ∠2=37   ∠12 = 53°
∠3 = 55°
∠4 = ∠4+55=90 ∠4=35°
∠5 = 88°
∠6 = linear pairs are suppl. ∠6=92°
∠7 = vertical ∠7=88°
∠8 = ∠8=92°
∠9 = 35°
∠10 = 100-35 = 65°
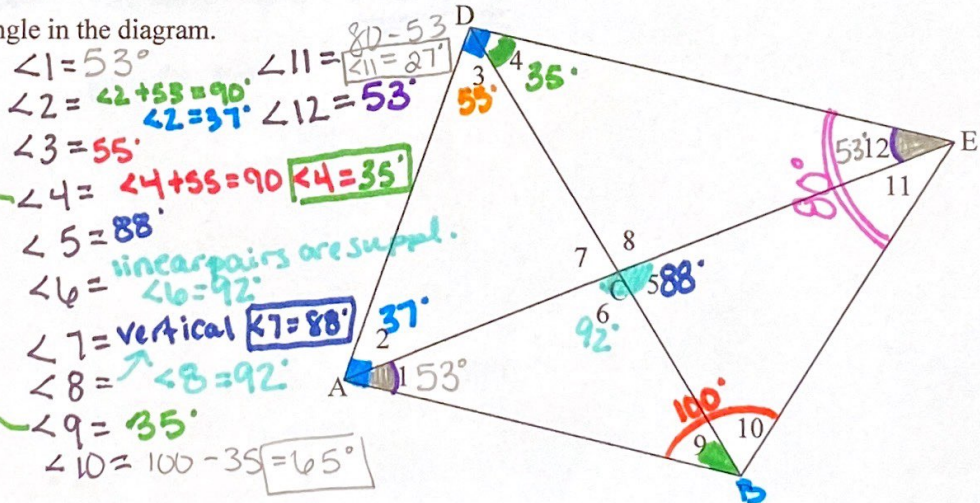
9) ∠1 and ∠2 are complementary. m∠1 = 2x + 7 and m∠2 = 4x - 19. Find the measure of each angle.

$$<1 + <2 = 90°$$ def of compl.

$$2x + 7 + 4x - 19 = 90$$

$$6x - 12 = 90$$

$$6x = 102$$

$$\boxed{x = 17}$$

$$<1 = 2(17) + 7$$

$$\boxed{<1 = 41°}$$

$$<2 = 4(17) - 19$$

$$\boxed{<2 = 49°}$$

10) ∠3 and ∠4 are supplementary. m∠3 = 5x + 22 and m∠4 = 7x + 2. Find the measure of each angle.

$$<3 + <4 = 180°$$

$$5x + 22 + 7x + 2 = 180°$$

$$12x + 24 = 180$$

$$12x = 156$$

$$\boxed{x = 13}$$

$$<3 = 5(13) + 22$$

$$\boxed{<3 = 87°}$$

$$<4 = 7(13) + 2$$

$$\boxed{<4 = 93°}$$

11) Use the diagram on the right to name:

a) two complementary angles

<EGD and <DGC
are compl.

b) a linear pair

<EGF and <FGA
are a linear pair

c) two adjacent angles

<FGD and <DGC are adjacent

but there are MANY

more ♥