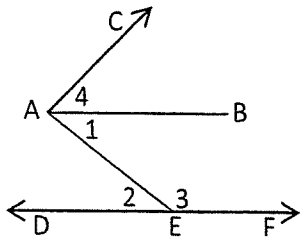
# Chapter: Begin Proofs
# TEST REVIEW

## SECTION I:

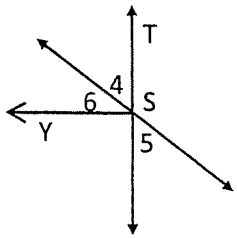
1. Write a flow proof for each of the following.

a. Given: $\overline{AB}$ bisects $\angle CAE$
$\angle 2 \cong \angle 4$

Prove: $\angle 1$ supplementary $\angle 3$

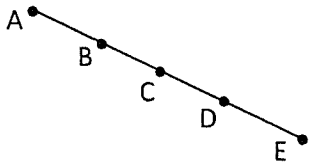



b. Given: $\overline{ST} \perp \overline{SY}$
Prove: $\angle 6$ complementary $\angle 5$



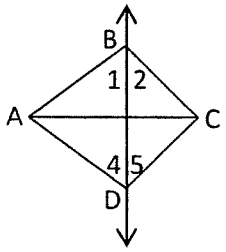
c. Given: B is the midpoint of $\overline{AC}$
D is the midpoint of $\overline{CE}$
$\overline{AB} \cong \overline{DE}$

Prove: $\overline{AC} \cong \overline{CE}$




d. Given: $\overline{AB} \perp \overline{BC}$; $\overline{AD} \perp \overline{CD}$
$\angle 1 \cong \angle 4$

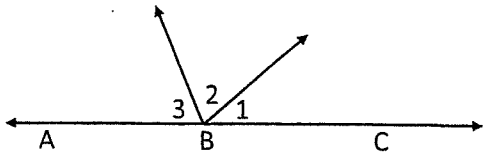
Prove: $\angle 2 \cong \angle 5$



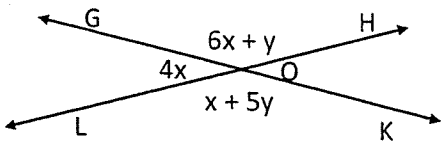
2. The sum of the measures of the supplement and complement of an angle is 184°. Find the measure of the angle, the complement and the supplement.

3. A, B and C are collinear. $\angle 1$, $\angle 2$ and $\angle 3$ are in the ratio of 4 : 5 : 7. Find the measure of each angle.

$m\angle 1 =$ _____
$m\angle 2 =$ _____
$m\angle 3 =$ _____




4. Find the measure of $\angle GOL$ and $\angle GOH$.



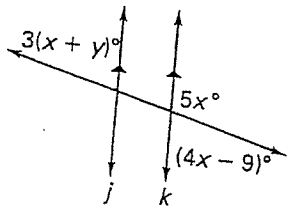
5. Determine if the following statements are sometimes, always or never true. Justify your answer.

a. Vertical angles are complementary.

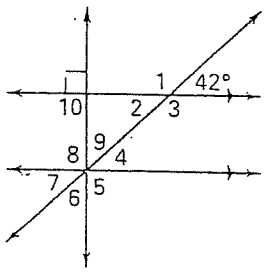
b. If $\angle A$ is complementary to $\angle B$ and $\angle B$ complementary to $\angle C$, then $\angle A$ is complementary to $\angle C$.

c. If $\angle 1 \cong \angle 2$, then $\angle 1$ and $\angle 2$ are vertical angles.

6. Lines j and k are parallel. Find the value of x and y.

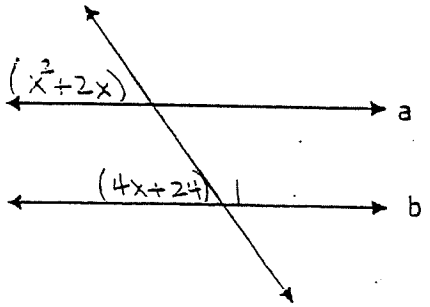



7. Find the measure of all labeled angles in the diagram.

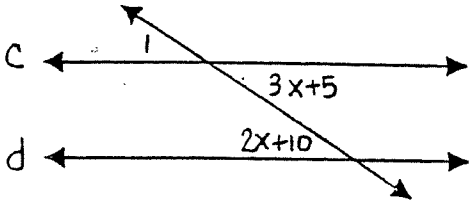


# SECTION II:

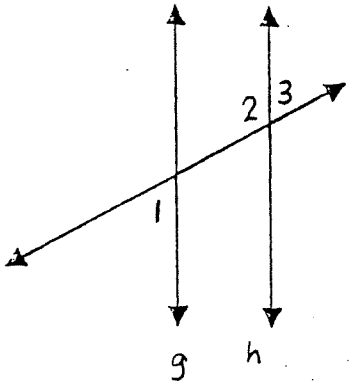
1. Given: a // b
   Find m∠1



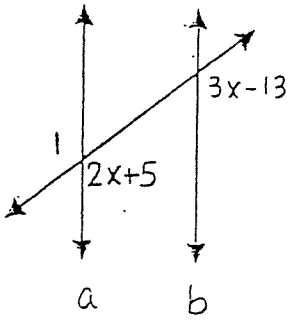

2. Given: c // d
   Find m∠1



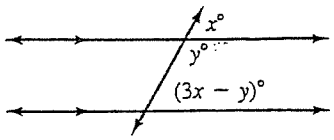

3. Given: g // h
   Prove: ∠1 is supplementary to ∠2




4. If a // b, find m∠1



11. Find the values of x and y.




12. .Given: $\overline{AO} \parallel \overline{BQ}$

$\overline{OP}$ and $\overline{QR}$ bisect ∠AOQ and OQB, respectively

Prove: $\angle 2 \cong \angle 4$