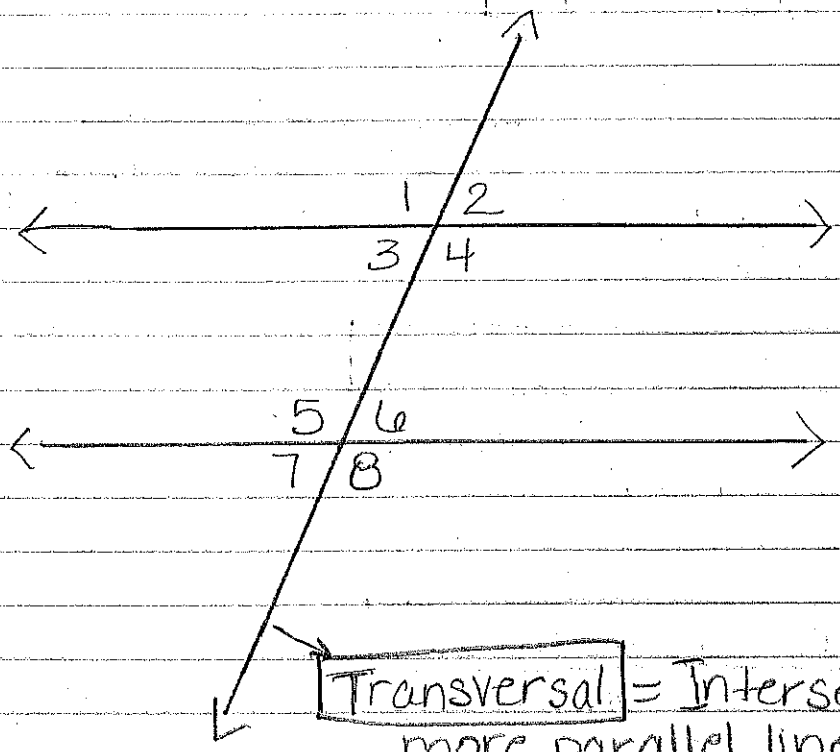
5.1 Lines & Classifying Angles



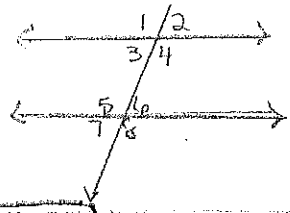
Transversal = Intersects 2 or more parallel lines. Makes 8 angles.

Interior Angles → lie inside the lines
$\angle 3, \angle 4, \angle 5, \angle 6$

Exterior Angles → lie outside the lines
$\angle 1, \angle 2, \angle 7, \angle 8$

Alternate Interior Angles → opposite interior angles, they are equal measure
$\angle 4 \& \angle 5$, $\angle 3 \& \angle 6$

Alternate Exterior Angles → opposite exterior angles, measures are equal.
$\angle 1 \& \angle 8$, $\angle 2 \& \angle 7$



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Vertical Angles → opposite angles of 2 intersecting lines
- opposite directions
- angles are equal

∠1 & ∠4, ∠2 & ∠3, ∠5 & 8
∠6 & ∠7

Corresponding Angles → lie in the same position, equal measure

∠1 & ∠5, ∠2 & ∠6, ∠4 & ∠8
∠3 & ∠7

Supplementary

Consecutive Interior - interior angles on same side of transversals

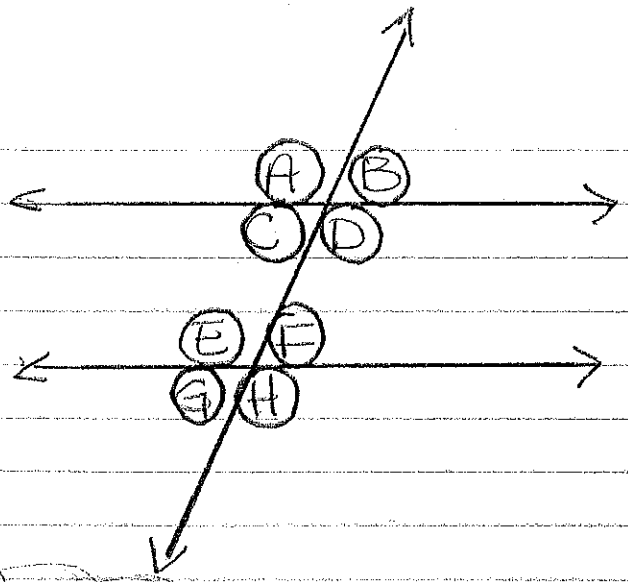
∠3 & ∠5 ∠4 & 6 not equal

Consecutive Exterior → exterior angles on same side of transversal

∠1 & ∠7, ∠2 & ∠8 not equal

→ ADD UP TO 180°

5.1 cont'd



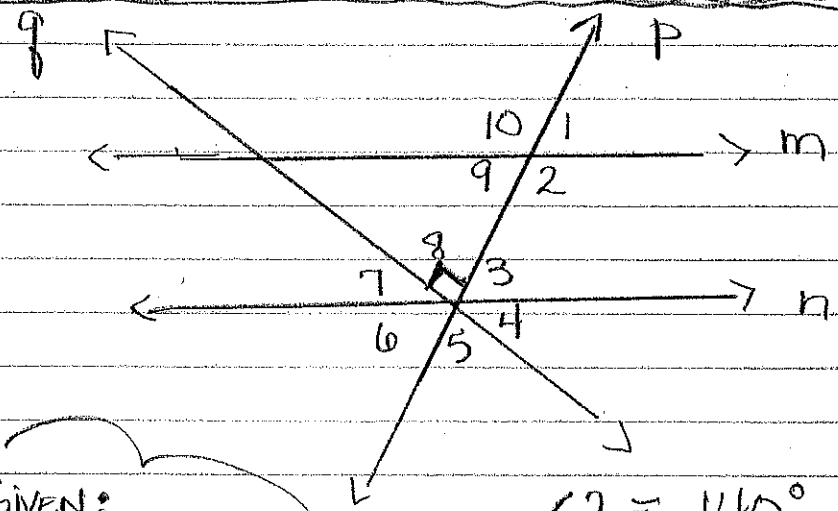
GIVEN:
$\angle A = 130^\circ$

$\angle A$ & $\angle D$ = vertical
$\angle A$ & $\angle E$ = corresponding
$\angle E$ & $\angle D$ = alt. interior
$\angle A$ & $\angle H$ = alt. exterior

$\angle B = \boxed{50^\circ}$

$180 - 130 = 50$

$\angle A$ & $\angle B$ Supplementary
$\angle C$ & $\angle B$ vertical
$\angle C$ & $\angle G$ corresponding



GIVEN:
$\angle 8 = 90^\circ$
$\angle 1 = 40$

$\angle 2 = 140^\circ$
$\angle 3 = 40^\circ$
$\angle 4 = 50$
$\angle 5 = 90^\circ$
$\angle 6 = 40^\circ$
$\angle 7 = 50^\circ$

$\angle 9 = 40^\circ$
$\angle 10 = 140^\circ$