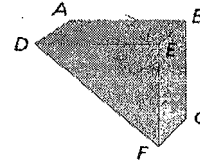


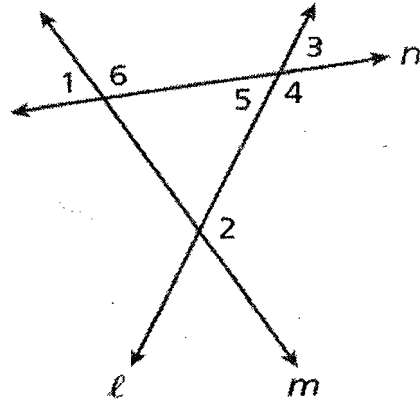
Identify an example of the following using the diagram given.

- 1) Skew Segments: DE and BC (varied)
- 2) Parallel Segments: AB || DE
- 3) Perpendicular Segments: AD ⊥ DE
- 4) Parallel Planes: ABC and DEF



Identify the transversal and classify each angle pair.

- 5) $\angle 5$ & $\angle 2$: AlA
 Transversal: l
- 6) $\angle 6$ & $\angle 3$: Corresponding
 Transversal: n
- 7) $\angle 2$ & $\angle 4$: SSI
 Transversal: l
- 8) $\angle 1$ & $\angle 2$: AEA
 Transversal: m



Solve for the variable(s) and find all angle measures

9) $m\angle 1 = (30x + 33)^\circ$
 $m\angle 2 = (20x + 58)^\circ$

$x = 5/2$ or 2.5

$m\angle 1 = 108^\circ$
 $m\angle 2 = 108^\circ$

10) $x = 13$

11) $x = 15.5$

12) $m\angle 1 = (x^2 + 94)^\circ$
 $m\angle 2 = (5x + 62)^\circ$

$x = 8$ or 3
 ext. -8

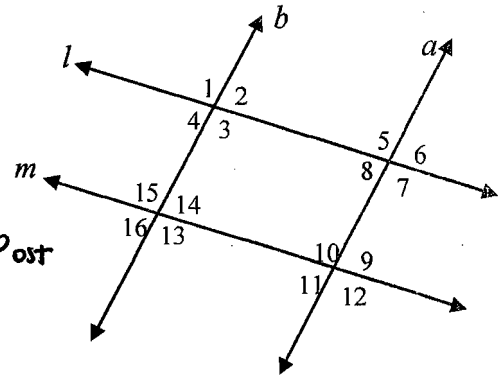
13) $x = -9$
 -2 is ext

14) $x = 1$
 $y = 20$

Fill in the blank proof.

15) Given: $a \parallel b$; $l \parallel m$

Prove: $\angle 6 \cong \angle 16$

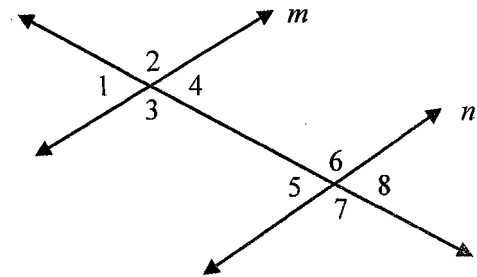


Statement	Reason
1) $a \parallel b$	Given
2) $\angle 6 \cong \angle 9$	Corresponding Angle Post
3) $l \parallel m$	Given
4) $\angle 9 \cong \angle 16$	Alt Ext. Angle Post
5) $\angle 6 \cong \angle 16$	Transitive Prop / Sub.

Write a proof based on the information given.

16) Given: $\angle 2$ and $\angle 8$ are supplementary.

Prove: $m \parallel n$



St.	Reason
1) $\angle 2 + \angle 8$ are Supp.	Given
2) $m\angle 2 + m\angle 8 = 180^\circ$	Defn of Supplementary
3) $\angle 2 \cong \angle 3$	Vertical Angle Thm.
4) $m\angle 2 \cong m\angle 3$	Defn of Congruency
5) $\angle 8 \cong \angle 5$	Vertical Angle Thm
6) $m\angle 8 \cong m\angle 5$	Defn of Congruency
7) $m\angle 3 + m\angle 5 = 180^\circ$	Substitution / Transitive
8) $\angle 3 + \angle 5$ are Supp.	Defn of Supplementary
9) $m \parallel n$	Converse of SSI.

17) Given: $\angle 2 \cong \angle 3$

Prove: $l_1 \parallel l_2$

St.	R.
1) $\angle 2 \cong \angle 3$	Given
2) $m\angle 2 = m\angle 3$	Defn of Cong.
3) $\angle 3 + \angle 1$ are Supp.	Picture
4) $m\angle 3 + m\angle 1 = 180^\circ$	Defn of Supp.
5) $m\angle 1 + m\angle 2 = 180^\circ$	Substitution
6) $l_1 \parallel l_2$	Converse of SSE

