

BOARD PROBLEMS CH. 7

① VERTICAL ANGLES ARE _____.

② DEFINE.

COMPLIMENTARY ANGLES



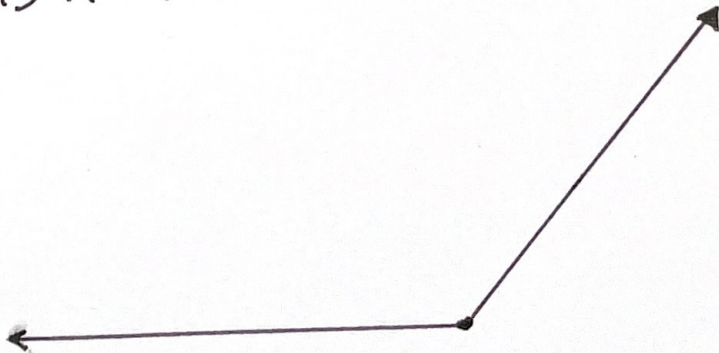
SUPPLEMENTARY ANGLES



③ DRAW A PERPENDICULAR BISECTOR.

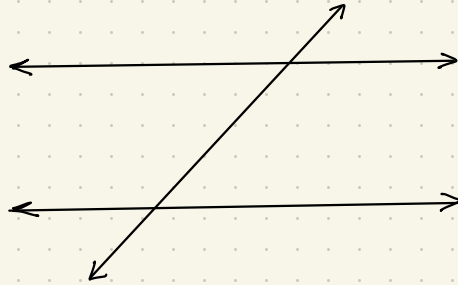


④ BISECT THIS ANGLE.



Ch. 7 - TRANSVERSALS

TRANSVERSALS



GIVEN: $\overleftrightarrow{L} \parallel \overleftrightarrow{M}$
LINE R IS A
TRANSVERSAL

INTERIOR ANGLES

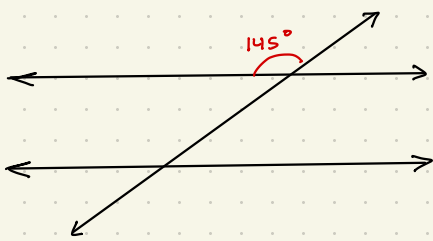
EXTERIOR ANGLES

CORRESPONDING ANGLES

ALTERNATE INTERIOR:

ALTERNATE EXTERIOR:

VERTICAL ANGLES



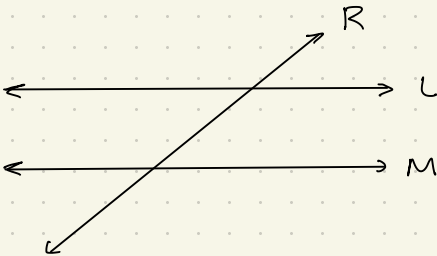
POSTULATE: _____

POSTULATE EXAMPLE:

CONVERSE OF A POSTULATE:

② WHEN A PAIR OF PARALLEL LINE IS CUT BY A TRANSVERSAL, _____ ARE CONGRUENT.

CONVERSE: _____



GIVEN: $\vec{L} \parallel \vec{M}$

③ IF TWO PARALLEL LINES ARE CUT BY A TRANSVERSAL, _____ ANGLES ARE CONGRUENT.

CONVERSE

IF _____ ARE CONGRUENT, TWO LINES CUT BY A TRANSVERSAL MUST BE _____.

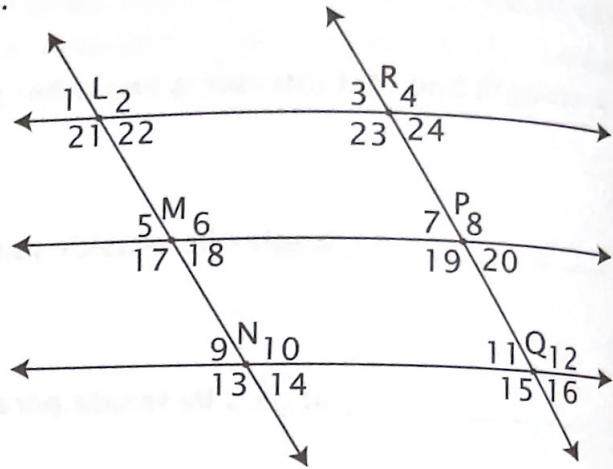
Fill in the blanks.

1. A straight line that intersects two other straight lines is called a(n) _____.
2. _____ angles lie outside parallel lines crossed by a transversal.
3. _____ angles lie inside parallel lines crossed by a transversal.
4. Given two parallel lines crossed by a transversal, corresponding angles are _____.
5. Interior angles on the opposite sides of a transversal are called _____ interior angles.
6. If corresponding angles are congruent, the lines crossed by the transversal must be _____.
7. Given parallel lines cut by a transversal, the measures of two alternate exterior angles are always congruent (the same) / different).
8. Given parallel lines, any pair of alternate interior angles are congruent.

Use the drawing to answer the questions.

write why

9. If $m\angle 1 = 60^\circ$,
then $m\angle 22 = \underline{\hspace{2cm}}^\circ$.
10. If $m\angle 1 = 60^\circ$,
then $m\angle 5 = \underline{\hspace{2cm}}^\circ$.
11. If $m\angle 1 = 70^\circ$,
then $m\angle 6 = \underline{\hspace{2cm}}^\circ$.
12. If $m\angle 1 = 70^\circ$,
then $m\angle 9 = \underline{\hspace{2cm}}^\circ$.
13. If $m\angle 8 = 120^\circ$,
then $m\angle 12 = \underline{\hspace{2cm}}^\circ$.
14. If $m\angle 8 = 120^\circ$,
then $m\angle 19 = \underline{\hspace{2cm}}^\circ$.



Given: \overleftrightarrow{LR} , \overleftrightarrow{MP} , and \overleftrightarrow{NQ} are \parallel .

The drawing is a sketch and not necessarily to scale. Do not make any assumptions about the lines and angles other than what is actually given. (Lines are assumed to be straight lines.)

15. Are $\angle 1$ and $\angle 17$ supplementary angles?
16. Are $\angle 2$ and $\angle 13$ alternate exterior angles?
17. Are $\angle 20$ and $\angle 11$ alternate exterior angles?
18. Assuming neither is a right angle, are $\angle 6$ and $\angle 9$ congruent?
19. Are $\angle 1$ and $\angle 9$ congruent?
20. If $\angle 12 \cong \angle 13$, are \overleftrightarrow{LN} and \overleftrightarrow{RQ} parallel?
(Think of \overleftrightarrow{NQ} as the transversal.)