

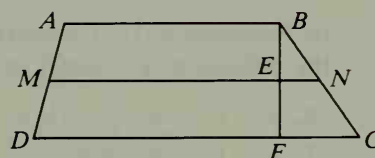
Chapter Test

Complete each statement with the word *always*, *sometimes*, or *never*.

1. A square is ? a rectangle.
2. A rectangle is ? a rhombus.
3. A rhombus is ? a square.
4. A rhombus is ? a parallelogram.
5. A trapezoid ? has three congruent sides.
6. The diagonals of a trapezoid ? bisect each other.
7. The diagonals of a rectangle are ? congruent.
8. The diagonals of a parallelogram ? bisect the angles.

Trapezoid $ABCD$ has median \overline{MN} .

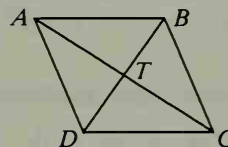
9. If $DC = 42$ and $MN = 35$, then $AB = \underline{\quad?}$.
10. If $FC = 9$, then $EN = \underline{\quad?}$.
11. If $AB = 5j + 7k$ and $DC = 9j - 3k$, then $MN = \underline{\quad?}$.



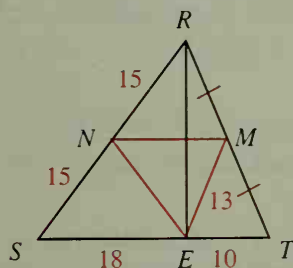
Can you deduce from the given information that quad. $ABCD$ is a parallelogram?

If so, what theorem can you use?

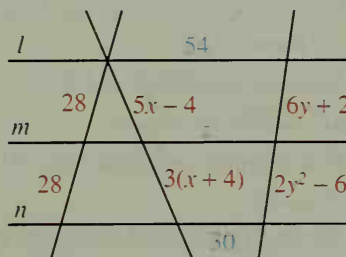
12. $\angle ADC \cong \angle CBA$ and $\angle BAD \cong \angle DCB$
13. $\overline{AD} \parallel \overline{BC}$ and $\overline{AD} \cong \overline{BC}$
14. $AT = CT$ and $DT = \frac{1}{2}DB$
15. \overline{AB} , \overline{BC} , \overline{CD} , and \overline{DA} are all congruent.



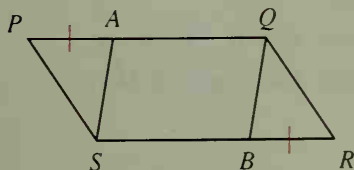
16. \overline{RE} is an altitude of $\triangle RST$.
Find MN , NE , and RT .



17. $l \parallel m \parallel n$
Find the values of x , y , and z .



18. Given: $\square PQRS$; $PA = RB$
Prove: $AS = BQ$



19. Given: $\overline{PR} \parallel \overline{VO}$; $\overline{RO} \parallel \overline{PV}$; $\overline{PR} \cong \overline{RO}$
Prove: $\angle 1$ and $\angle 2$ are complementary.

