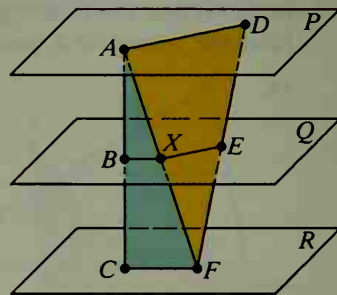


- C 25.** Given: Parallel planes P , Q , and R cutting transversals \overleftrightarrow{AC} and \overleftrightarrow{DF} ; $AB = BC$

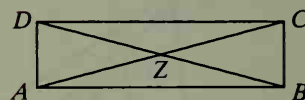
Prove: $DE = EF$

(Hint: You can't assume that \overleftrightarrow{AC} and \overleftrightarrow{DF} are coplanar. Draw \overline{AF} , cutting plane Q at X . Using the plane of \overleftrightarrow{AC} and \overline{AF} , apply Theorems 3-1 and 5-10. Then use the plane of \overline{AF} and \overleftrightarrow{FD} .)

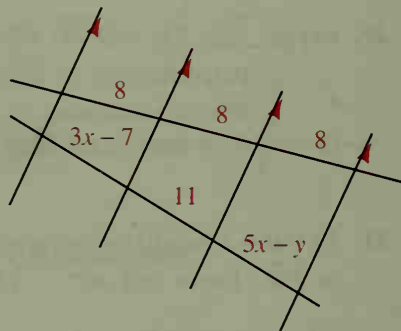


Self-Test 1

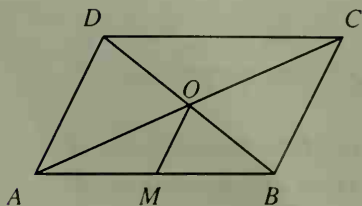
The diagonals of $\square ABCD$ intersect at Z . Tell whether each statement *must be*, *may be*, or *cannot be* true.



1. $\overline{AC} \cong \overline{BD}$
2. $\overline{DZ} \cong \overline{BZ}$
3. $\overline{AD} \parallel \overline{BC}$
4. $m\angle DAB = 85$ and $m\angle BCD = 95$
5. List five ways to prove that quad. $ABCD$ is a parallelogram.
6. a. State a theorem that allows you to conclude that $3x - 7 = 11$.
b. Find the values of x and y .



7. Given: $\square ABCD$;
 M is the midpoint of \overline{AB} .
Prove: $MO = \frac{1}{2}AD$



8. Given: $\square PQRS$;
 \overline{PX} bisects $\angle QPR$;
 \overline{RY} bisects $\angle SRP$.
Prove: $\square RYPX$ is a \square .

