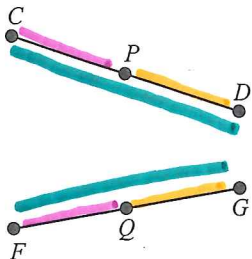


Segment Proof Review

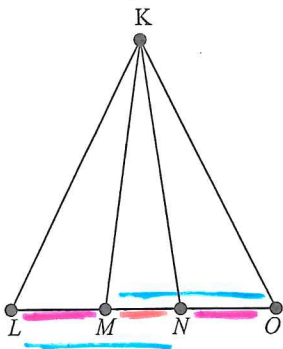
Short Answer

Write a two-column proof to prove the following.

1. If $\overline{CP} \cong \overline{FQ}$ and $\overline{PD} \cong \overline{QG}$, then $\overline{CD} \cong \overline{FG}$.



2. If $\overline{LM} \cong \overline{NO}$, then $\overline{LN} \cong \overline{MO}$.



1. $CP \cong FQ$
 $PD \cong QG$

2. $CP + PD = CD$
 $FQ + QG = FG$

3. $FQ + QG = CD$

4. $CD \cong FG$

1. given

2. Segment addition

3. Subs!

4. Subs!

1. $LM \cong NO$

2. $LN = LM + MN$
 $MO = NO + MN$

3. $LN = NO + MN$

4. $LN \cong MO$

1. given

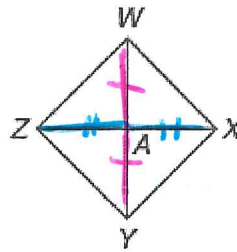
2. Segment addition

3. Subs.

4. Subs.

3.

Given: $WY \cong ZX$
 A is the midpoint of \overline{WY} .
 A is the midpoint of \overline{ZX} .



Prove: $\overline{WA} \cong \overline{ZA}$

Proof:

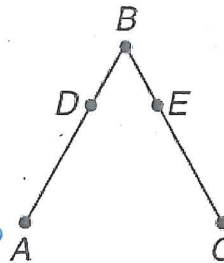
1. $\overline{WY} \cong \overline{ZX}$
 A is midpoint of \overline{WY}
 A is midpoint of \overline{ZX}
2. $WA \cong YA$ $ZA \cong AX$
3. $WY = WA + YA$
 $ZX = ZA + AX$
4. $WA + YA = ZA + AX$
5. $WA + WA = ZA + ZA$
 $2WA = 2ZA$
6. $WA = ZA$

1. given

2. def of midpoint
3. Segment add.
4. Subs.
5. Subs
6. CLT
7. divide

Given: $\overline{AD} \cong \overline{CE}$, $\overline{DB} \cong \overline{EB}$

Prove: $\overline{AB} \cong \overline{CB}$



1. $\overline{AD} \cong \overline{CE}$, $\overline{DB} \cong \overline{EB}$

2. $AB = AD + DB$
 $CB = CE + EB$

3. $AB = CE + EB$

4. $AB \cong CB$

1. given

2. Segment add.
3. Subs.
4. Subs.