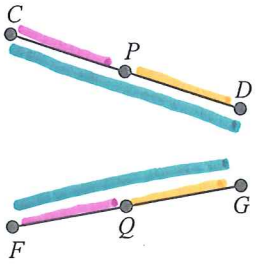
Name: Key Class: _____ Date: _____ ID: A

Segment Proof Review

Short Answer

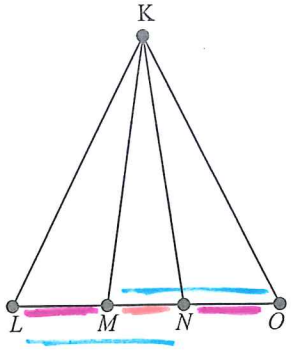
Write a two-column proof to prove the following.

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



1. $CP \cong FQ$ $PD \cong QG$	1. given
2. $CP + PD = CD$ $FQ + QG = FG$	2. Segment addition
3. $FQ + QG = CD$	3. Subs!
4. $CD \cong FG$	4. Subs!

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

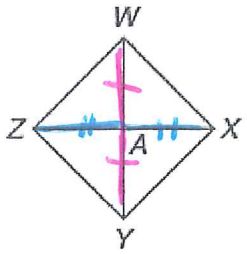


1. $LM \cong NO$	1. given
2. $LN = LM + MN$ $MO = NO + MN$	2. Segment additni
3. $LN = NO + MN$	3. subs.
4. $LN \cong MO$	4. Subs.

Name: _____ ID: A

3.

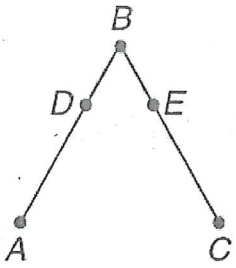
Given: $WY \cong ZX$
A is the midpoint of $\overline{WY}$.
A is the midpoint of $\overline{ZX}$.
Prove: $\overline{WA} \cong \overline{ZA}$
Proof:



1. $WY \cong ZX$ A is midpoint of WY A is midpt of ZX	1. given
2. $WA \cong YA$ $ZA \cong AX$	2. def of midpt
3. $WY = WA + YA$ $ZX = ZA + AX$	3. Segment add.
4. $WA + YA = ZA + AX$	4. Subs.
5. $WA + WA = ZA + ZA$	5. Subs
6. $2WA = 2ZA$	6. CLT
7. $WA = ZA$	7. divide

4.

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



1. $AD \cong CE$, $DB \cong EB$	1. given
2. $AB = AD + DB$ $CB = CE + EB$	2. Segment add.
3. $AB = CE + EB$ $CB = AD + DB$	3. subs.
4. $AB \cong CB$	4. Subs.