



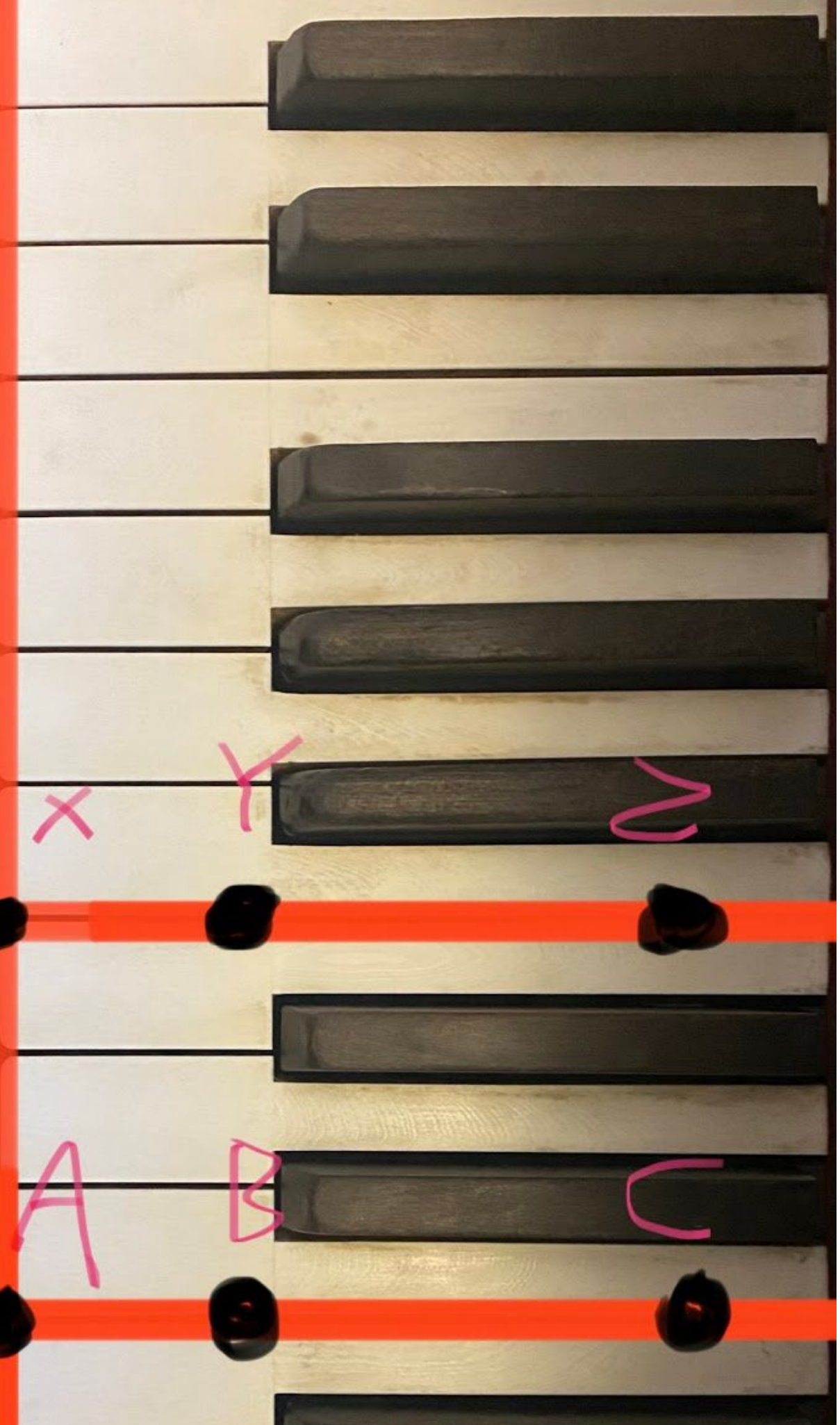
Question 1:

Given: Segment DB is congruent to segment CA

Prove: Segment DC is congruent to BA







Question 2:

Given: Segment AB is congruent to segment XY ; Segment YZ is congruent to segment BC

Prove: Segment AC is congruent to segment XZ

Answers:

# Segment Proof Project

## Answers

①	Statements	Reasoning (Prove: $\overline{DC} \cong \overline{BA}$ )
a.	$\overline{DB} \cong \overline{CA}$	Given
b.	$DB = CA$	Definition of Congruence
c.	$DC + CB = DB$ ; $CB + BA = CA$	Segment Addition Postulate
d.	$DC + CB =$ $CB + BA$	Substitution
e.	$DC + CB - CB =$ $CB + BA - CB$	Subtraction Property of Equality
f.	$DC = BA$	Substitution
g.	$\overline{DC} \cong \overline{BA}$	Definition of Congruence

②	Statements	Reasoning (Prove: $\overline{AC} \cong \overline{XZ}$ )
a.	$\overline{AB} \cong \overline{XY}$ ; $\overline{BC} \cong \overline{YZ}$	Given
b.	$AB = XY$ ; $BC = YZ$	Definition of Congruence
c.	$AB + BC = AC$ ; $XY + YZ = XZ$	Segment Addition Postulate
d.	$AB + BC = XZ$ ; $XY + YZ = AC$	Substitution
e.	$AC = XZ$	Substitution
f.	$\overline{AC} \cong \overline{XZ}$	Definition of Congruence