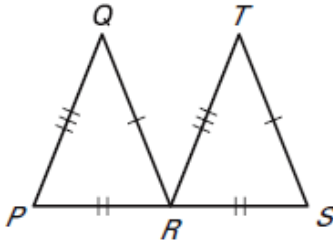
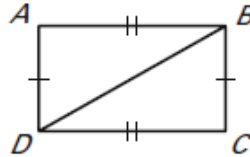


Decide whether the congruence statement is true. *Explain your reasoning.*

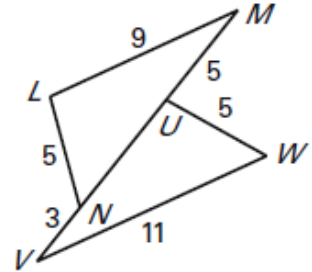
1. $\triangle PQR \cong \triangle RTS$



2. $\triangle ABD \cong \triangle CDB$

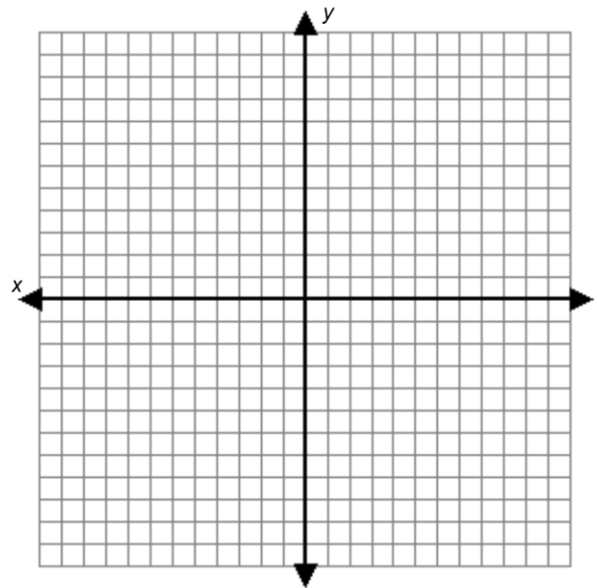


3. $\triangle LMN \cong \triangle UVW$

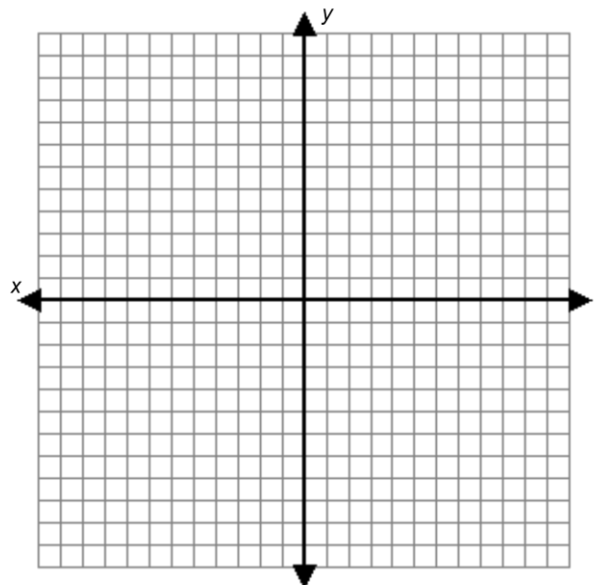


Use the distance formula and the given coordinates to determine if $\triangle ABC \cong \triangle DEF$.

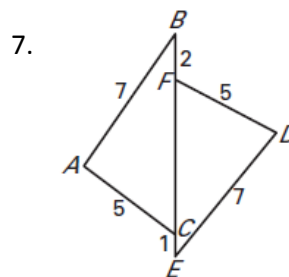
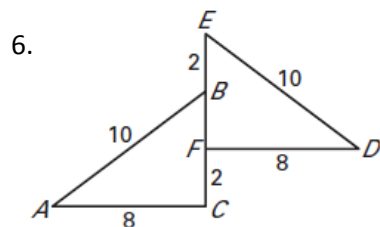
4. A(1, 2), B(4, -3), C(2, 5), D(4, 7), E(7, 2), F(5, 10)



5. A(1, 1), B(4, 0), C(7, 5), D(4, -5), E(6, -6), F(9, -1)



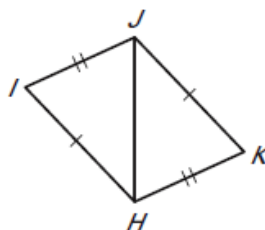
Determine whether $\triangle ABC \cong \triangle DEF$. Explain your reasoning.



8. Complete the proof.

GIVEN: $\overline{HI} \cong \overline{JK}$,
 $\overline{IJ} \cong \overline{KH}$

PROVE: $\triangle HIJ \cong \triangle JKH$

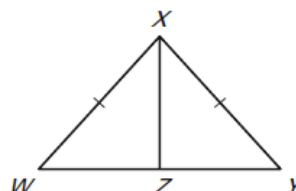


Statements	Reasons
1. <u> ?</u>	1. Given
2. <u> ?</u>	2. Given
3. <u> ?</u>	3. Reflexive Property of Congruence
4. <u> ?</u>	4. SSS Congruence Postulate

9. Complete the proof.

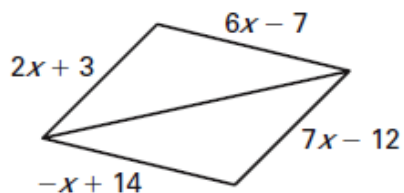
GIVEN: $\overline{WX} \cong \overline{YX}$,
 Z is the midpoint of \overline{WY} .

PROVE: $\triangle WXZ \cong \triangle YXZ$



Statements	Reasons
1. <u> ?</u>	1. Given
2. <u> ?</u>	2. Given
3. <u> ?</u>	3. Definition of Midpoint
4. <u> ?</u>	4. Reflexive Property of Congruence
5. <u> ?</u>	5. SSS Congruence Postulate

10. Find all values of x that make the triangles congruent. *Explain.*



ANSWER KEY:

- 1) Yes, by SSS
- 2) Yes, by SSS
- 3) Yes, by SSS
- 4) Congruent by SSS
- 5) Not congruent, corresponding sides are not congruent
- 6) Yes, SSS
- 7) No, corresponding sides are not congruent.
- 8) $\overline{HI} \cong \overline{JK}$; $\overline{IJ} \cong \overline{KH}$; $\overline{HJ} \cong \overline{HJ}$; $\triangle HIJ \cong \triangle JKH$
- 9) $\overline{WX} \cong \overline{YX}$; Z is midpoint of \overline{WY} ; $\overline{WZ} \cong \overline{YZ}$; $\overline{XZ} \cong \overline{XZ}$; $\triangle WXZ \cong \triangle YXZ$
- 10) $x = 3$; Setting $2x + 3 = 7x - 12$ and $-x + 14 = 6x - 7$ yields $x = 3$ in both equations.