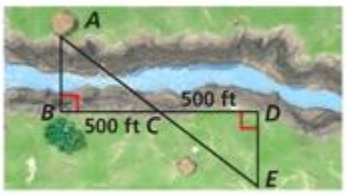
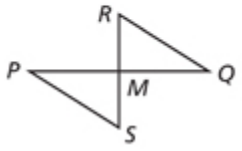
3.10 Homework (CPCTC)

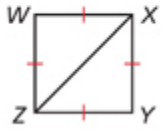
7. Surveying To find the distance AB across a river, a surveyor first locates point C. He measures the distance from C to B. Then he locates point D the same distance east of C. If $DE = 420$ ft, what is AB?



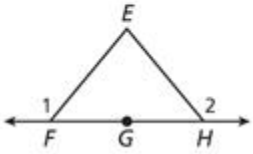
8. Given: M is the midpoint of $\overline{PQ}$ and $\overline{RS}$.
Prove: $\overline{QR} \cong \overline{PS}$



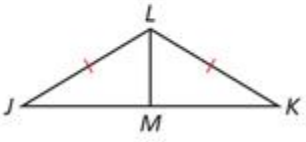
9. Given: $\overline{WX} \cong \overline{XY} \cong \overline{YZ} \cong \overline{ZW}$
Prove: $\angle W \cong \angle Y$



10. Given: G is the midpoint of $\overline{FH}$. $\overline{EF} \cong \overline{EH}$
Prove: $\angle 1 \cong \angle 2$



11. Given: $\overline{LM}$ bisects $\angle JLK$. $\overline{JL} \cong \overline{KL}$
Prove: M is the midpoint of $\overline{JK}$.

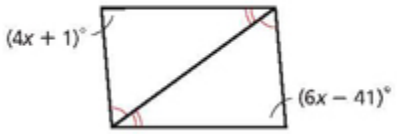


3.10 Homework (CPCTC)

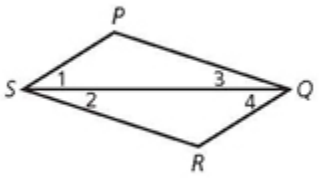
Multi-Step Find the value of x.

17.

18.



Use the diagram for Exercises 19–21.

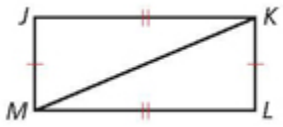


19. **Given:** $PS = RQ$, $m\angle 1 = m\angle 4$
Prove: $m\angle 3 = m\angle 2$

20. **Given:** $m\angle 1 = m\angle 2$, $m\angle 3 = m\angle 4$
Prove: $PS = RS$

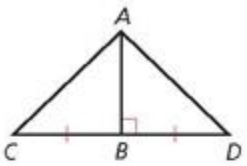
21. **Given:** $PS = RQ$, $PQ = RS$
Prove: $\overline{PQ} \parallel \overline{RS}$

22. **Critical Thinking** Does the diagram contain enough information to allow you to conclude that $\overline{JK} \parallel \overline{ML}$? Explain.



24. Which of these will NOT be used as a reason in a proof of $\overline{AC} \cong \overline{AD}$?

Ⓐ SAS
Ⓑ CPCTC
Ⓒ ASA
Ⓓ Reflexive Property

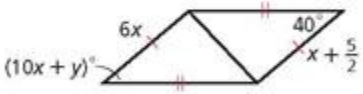


25. Given the points $K(1, 2)$, $L(0, -4)$, $M(-2, -3)$, and $N(-1, 3)$, which of these is true?

Ⓕ $\angle KNL \cong \angle MNL$
Ⓖ $\angle LNK \cong \angle NLM$
Ⓗ $\angle MLN \cong \angle KLN$
Ⓙ $\angle MNK \cong \angle NKL$

26. What is the value of y?

Ⓐ 10
Ⓑ 20
Ⓒ 35
Ⓓ 85



27. Which of these are NOT used to prove angles congruent?

Ⓕ congruent triangles
Ⓖ noncorresponding parts
Ⓗ parallel lines
Ⓙ perpendicular lines