

A serene sunset scene over a body of water. The sky is a mix of soft pinks, oranges, and yellows, with the sun low on the horizon. The water reflects the colors of the sky. On the left side, there is a large, dark silhouette of a tree with many branches. The overall mood is peaceful and calm.

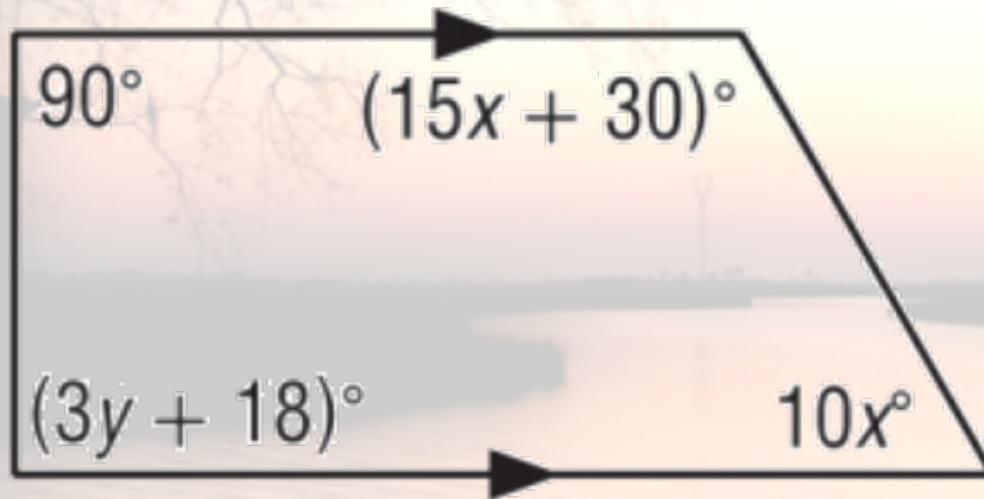
# Introduction to Proofs

# Introduction to Proofs

- Use properties of parallel lines to prove that lines are parallel or make other conclusions about geometric shapes.
- Language Objectives:
  - Write proofs involving parallel lines.
  - Explain ideas to classmates.

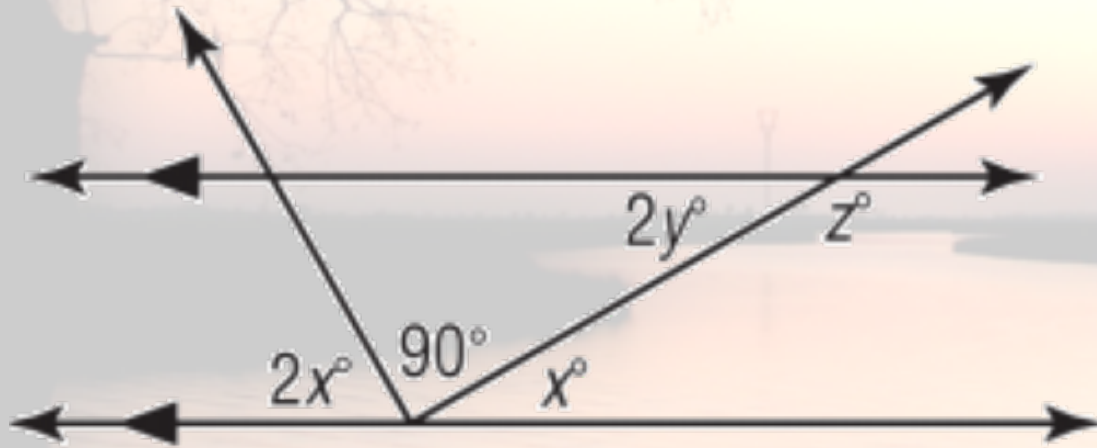
# Practice

- Solve for  $x$  and  $y$ . Explain your reasoning.



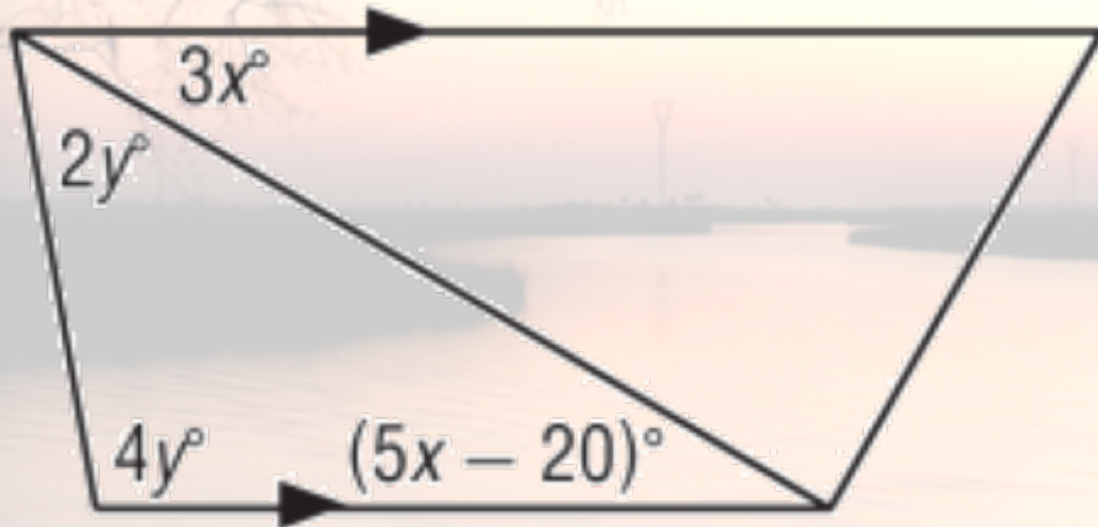
# Practice

- Solve for  $x$ ,  $y$ , and  $z$ . Explain your reasoning.



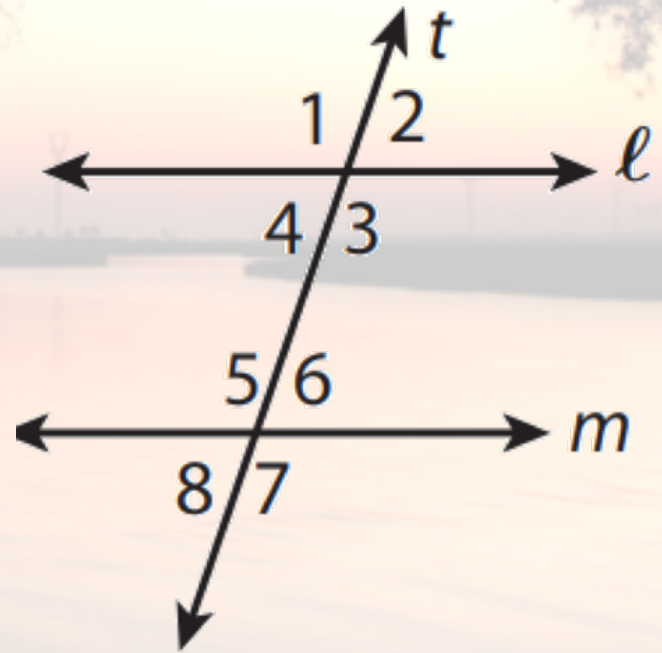
# Practice

- Solve for  $x$  and  $y$ . Explain your reasoning.



# Proving Parallel Lines

- Given  $\angle 1 \cong \angle 5$ , prove that  $l \parallel m$ .



# Proving Parallel Lines

- Prove that  $\angle 4 \cong \angle 13$ .
- Prove that  $\angle 4$  is congruent to  $\angle 14$ .

