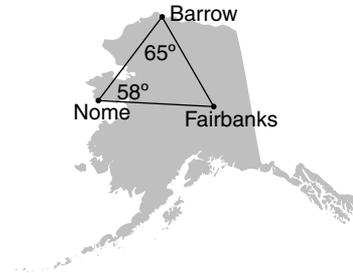


LESSON
5-5

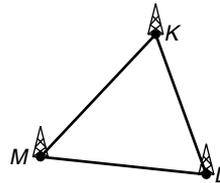
Problem Solving

Indirect Proof and Inequalities in One Triangle

1. A charter plane travels from Barrow, Alaska, to Fairbanks. From Fairbanks, it flies to Nome, and then back to its starting point in Barrow. Which of the three legs of the trip is the longest?

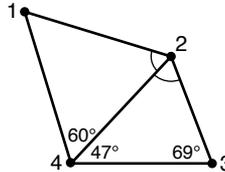


2. Three cell phone towers are shown at the right. The measure of $\angle M$ is 10° less than the measure of $\angle K$. The measure of $\angle L$ is 1° greater than the measure of $\angle K$. Which two towers are closest together?



Use the figure for Exercises 3 and 4.

In disc golf, a player tries to throw a disc into a metal basket target. Four disc golf targets on a course are shown at right.



3. Which two targets are closest together?

4. Which two targets are farthest apart?

Choose the best answer.

5. The distance from Jacksonville to Tampa is 171 miles. The distance from Tampa to Miami is 206 miles. Use the Triangle Inequality Theorem to find the range for the distance from Jacksonville to Miami.

- A $0 \text{ mi} < d < 35 \text{ mi}$
- B $0 \text{ mi} < d < 377 \text{ mi}$
- C $35 \text{ mi} < d < 377 \text{ mi}$
- D $-35 \text{ mi} < d < 377 \text{ mi}$

6. In Jessica's room, the distance from the door D to the closet C is 4 feet. The distance from the closet to the window W is 6 feet. The distance from the window to the door is 8 feet. On a floor plan of her room, $\triangle CDW$ is drawn. Order the angles from least to greatest measure.

- F $\angle C, \angle D, \angle W$
- G $\angle D, \angle C, \angle W$
- H $\angle W, \angle C, \angle D$
- J $\angle W, \angle D, \angle C$

7. Walking paths at a park are shown. Which route represents the greatest distance?

- A A to B to D
- B A to D to B
- C C to B to D
- D C to D to B

