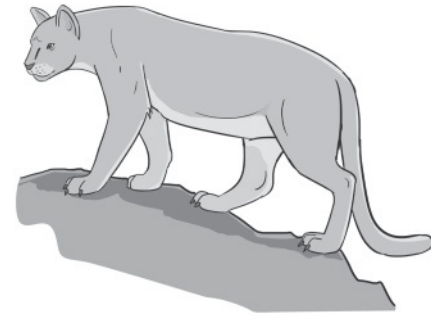


Home Range

Did You Know? Mountain lions, or cougars, are the largest family of cats in North America. Cougars use steep canyons, rock formations, or brush and forests to remain hidden while hunting. Cougars live and travel in an unmarked area called a home range, which is similar to a territory.

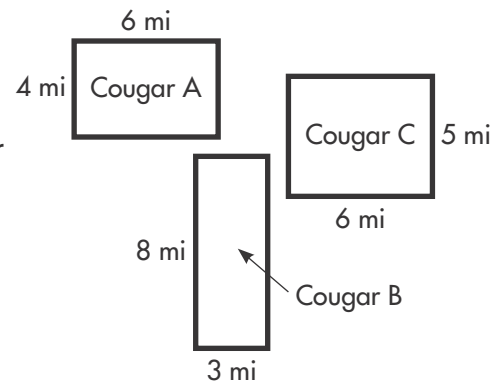


A biologist is studying 3 female cougars. She sketches the diagram at the right to show their home ranges.

- 1 Cougar A and Cougar B walk the perimeters of their home ranges. How many miles do they each walk?

Cougar A walks 20 miles.

Cougar B walks 22 miles.



- 2 Which cougar has the larger area to cover, Cougar A or Cougar B?

Their home ranges have the same area.

- 3 Which home range has the same perimeter as the home range of Cougar C?

Cougar B

- 4 Do the home ranges of Cougars B and C have the same area? Explain.

No; $8 \times 3 = 24$; $5 \times 6 = 30$

- 5 **Extension** Another rectangular home range is discovered. It has the same area as the home range of Cougar C, but a different perimeter. What is one possible perimeter of this home range? Explain.

Sample answer: 26 miles; The home range could be

3 miles by 10 miles; $P = (3 \times 2) + (10 \times 2) = 26$ miles