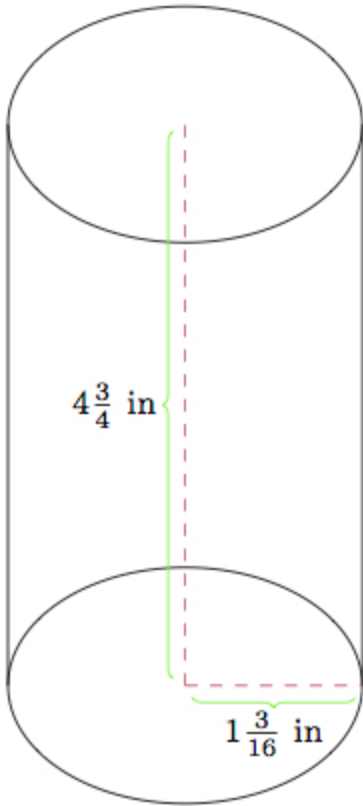


- c. Suppose Farmer Brown decides to use the same amount of fence to build a rectangular pen. Design the rectangular pen that would maximize the pasture area. What would be the dimensions and area of this new pen? How many cows could it sustain?

Example 2: A cylindrical soda can is made of aluminum. It is approximately $4\frac{3}{4}$ inches high and the top and bottom have a radius of approximately $1\frac{3}{16}$ inches:



a. Find the approximate surface area of the soda can.

b. The density of aluminum is approximately 2.70 grams per cubic centimeter. If the mass of the soda can is approximately 15 grams, how many cubic centimeters of aluminum does it contain?

