

# Lagrange Multipliers



## Question

If you want to design a soda can to hold  $350 \text{ cm}^3$  of soda using the least amount of metal to make the can, which optimization problem should you solve?



- A.  $\min 2\pi r h$  subject to  $\pi r^2 h = 350$
- B.  $\min \pi r^2 h$  subject to  $2\pi r h + 2\pi r^2 = 350$
- C.  $\min 2\pi r h + 2\pi r^2$  subject to  $\pi r^2 h = 350$
- D.  $\min \pi r^2 h$  subject to  $2\pi r h = 350$