

More Optimizing

1. The strength of a rectangular beam of width w and height h is proportional to hw^2 . A beam is to be cut from a log of radius r . What beam dimensions maximize the strength of this beam?
2. What is the largest cone that will fit inside a sphere of radius 6?
3. You have a wire of length L . You wish to use it to make a circle and a square. Let x be the length of wire that you will bend to make the circle? What value of x maximizes the total area enclosed by the circle and the square?