Design Choices for Rectangle and Square

Rectangle extends Square

* pro - all we need to add field-wise is a height!
* pro - inherit draw, get/setWidth, getUpperLeft, and being Drawable (interface)
* con - have to override draw()
* con - have to expose fields in square as protected access
* con saying "Rectangle IS-A Square" (not always right for geometry!)
* biggest con - we can pass a Rectangle to a method expecting a Square and "bad things" might happen

Square extends Rectangle

* pro - saying Square IS-A Rectangle which is true geometrically
* pro - Square has very little code (or at least at first!)
* con - override setWidth AND setHeight
* biggest con - methods added to Rectangle might quietly break Square

Square HAS-A Rectangle

* pro - still have code reuse
* pro - Square isn't fragile (methods can be added to Rectangle without hurting Square)
* con - a little more code than other possibilities
* biggest con - geometrical relationship between Square's and Rectangle's is gone.
* probably the best way to go