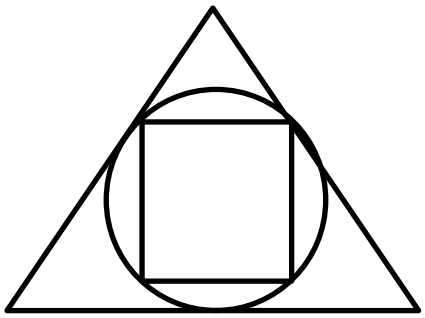
Coding Kata: “Circle Square Triangle”

There is an object called ShapeStacker. You give this object a series of shape objects and ask it to “stack!” which will be as though a person were laying down shapes on a table on top of each other. They are stacked with the largest shape on bottom to the smallest shape on top so that you can see some portion of all the shapes.

For example:



Output representation in code:

T[C[S]] → This means you see the triangle which contains the circle which contains the square.

You give to ShapeStacker

Add Square with side length: 10

Add Triangle with side 1: 20, sides 2 & 3: 22

Add Circle with diameter: 7

ShapeStacker stack yeilds

Prints “T[C[S]]”

This is an object-oriented exercise. At a minimum, you should code objects for ShapeStackerTest, ShapeStacker, Circle, Square, Triangle, and Rectangle.

It’s up to you to determine the order to appear when stacked based on sizes and what fits inside what.

It’s up to you to decide how to handle the case where two shapes cover the same area.
i.e. Square (side:4) and Rectangle (length: 4, width: 4)

ShapeStackTest cases:

- Assert(Square(4), Circle(4), Triangle(4,10), “T[S[C]]”)
- Assert(Square(4), Circle(6), Rectangle(2,4), “C[S[R]]”)
- Assert(Triangle(4,10), Circle(20), “C[T]”)
- Assert(Square(4), Rectangle(4,4), ???)

Good luck!