

C. To submit (due Thursday, 3/25):

1. Check and verify Euler's formula for the [Platonic solid graphs](#).
2. Create your own Vi Hart squiggle (it's got to be closed), and show that it can be colored the way she does.
3. Can you draw one of the knots she does, with snakes?
4. Draw the borromean rings as snakes or ropes.

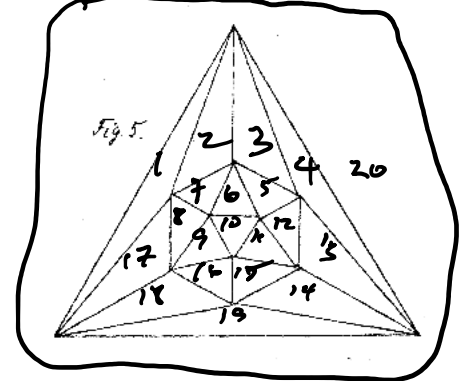
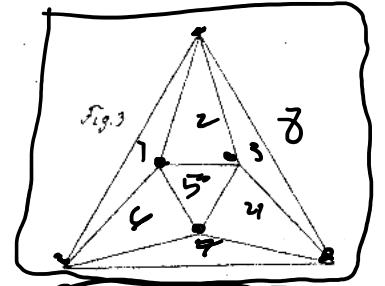
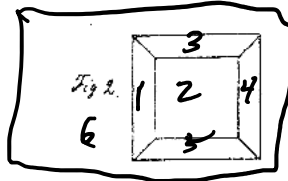
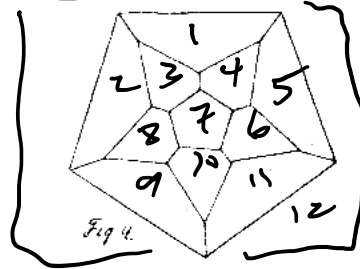
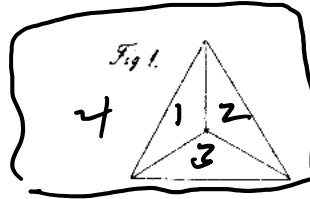


Fig 1. Tetrahedron:

6 edges, 4 vertices, 4 regions

$$4 - 6 + 4 = 2$$

Fig 2. Hexahedron (cube):

12 edges, 8 vertices, 6 regions

$$6 - 12 + 8 = 2$$

Fig 3. Octahedron:

12 edges, 6 vertices, 8 regions

$$8 - 12 + 6 = 2$$

Fig 4. Dodecahedron:

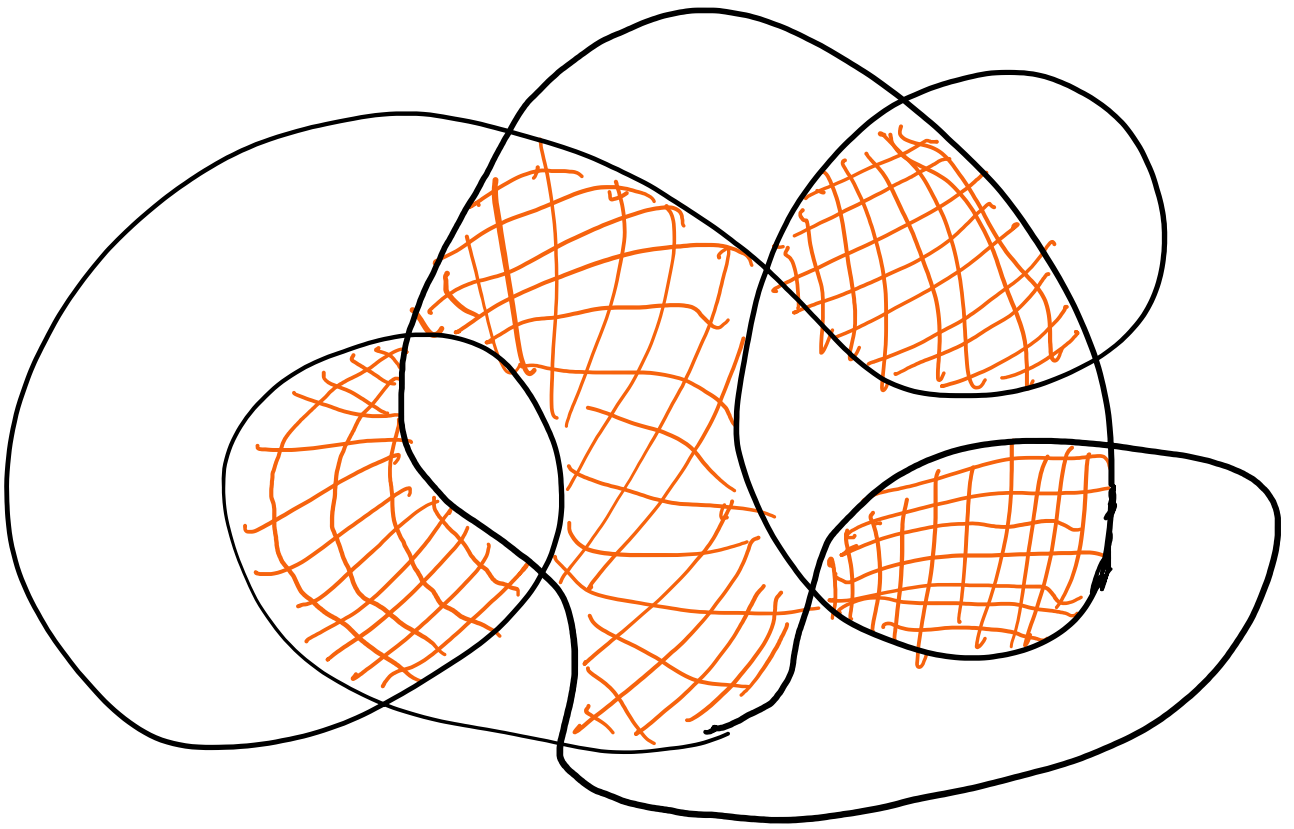
30 edges, 20 vertices, 12 regions

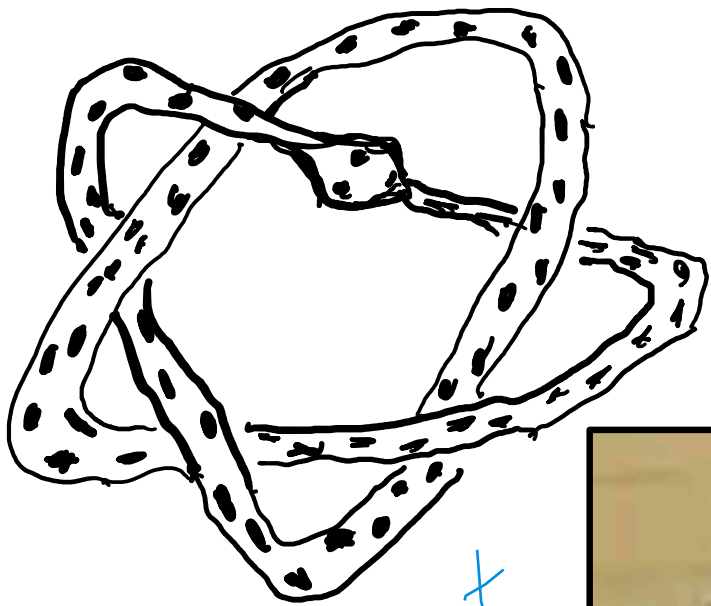
$$12 - 30 + 20 = 2$$

Fig 5. Icosahedron:

30 edges, 12 vertices, 20 regions

$$20 - 30 + 12 = 2$$



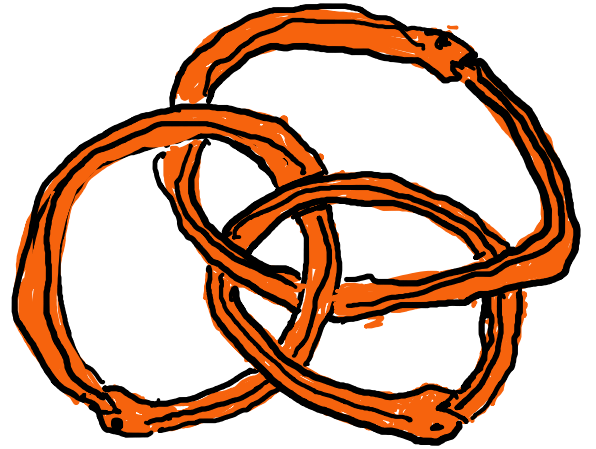
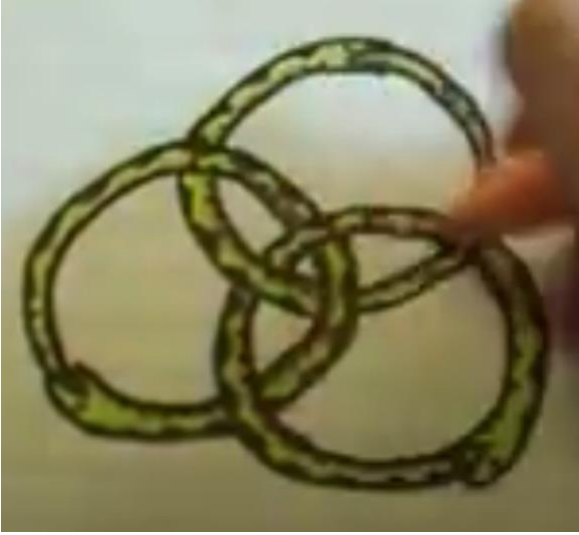


Sir
Pentagram...

To be a knot
the snake must
grab its
tail.



Not even a
knot!



The Borromean rings must
lay on top of each other:
each lays on top of one
other.

Make some out of
rubber bands (you'll have
to cut one a thread
it through the
others).