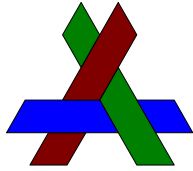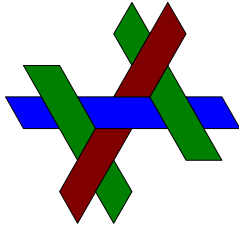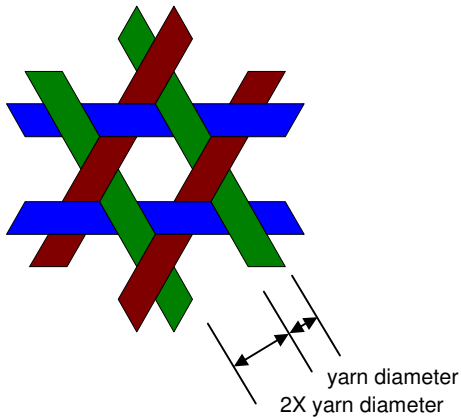# Locked Intersection Theory

Horizontal Blue yarn is constrained from moving up.

By adding another Green yarn, the Blue yarn is constrained from moving either up or down.

Extending the yarn count in all directions constrains all yarns from moving.

yarn diameter
2X yarn diameter

The locked intersection is geometrically controlled by yarn diameter and yarn spacing (ppi). The yarn diameter is determined by the denier and filament packing. The yarns per inch (ppi) is determined by the loom mechanics – 9.3 per inch.