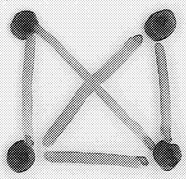
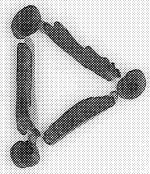
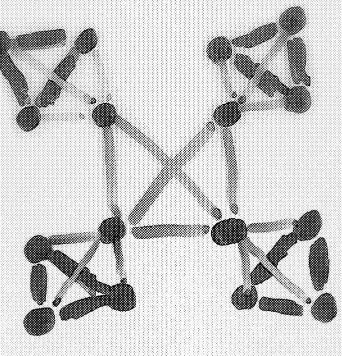


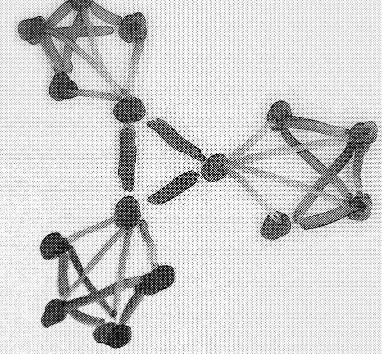
Γ_1



Γ_2



$\Gamma_1 \circ \Gamma_2$

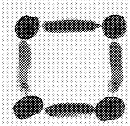
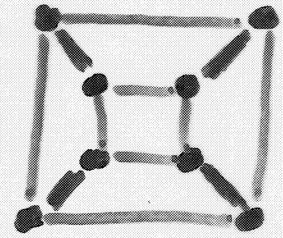


$\Gamma_2 \circ \Gamma_1$

Further fun constructs can be built. A graph is complete if it has all possible edges, and we denote by K_p the complete graph on p nodes. Define the 1-cube to be K_2 and then recursively, the n-cube ...

$$Q_n := K_2 \times Q_{n-1}.$$

For example ...

$Q_1 =$  , $Q_2 =$  , $Q_3 =$ 

If Γ is a graph, we define its square to be Γ^2 which has the same vertices as Γ, and has an edge joining u and v iff $d(u,v) \leq 2$ in Γ. We define Γ^n the same way, though with edges u-v iff the distance $d(u,v) \leq n$ in Γ.

Finally, in this vein, we define a clique of Γ to be a maximal complete subgraph, and we build the clique graph induced by Γ to have nodes corresponding to each clique of Γ and edges iff the corresponding cliques meet in Γ. For example ...