

$K_{3,3}$

$$\binom{n}{k} := \frac{n!}{k!(n-k)!}$$

$$(x+y)^n = \underbrace{(x+y)(x+y)\dots(x+y)}_n$$

$$\binom{n}{0}x^n + \binom{n}{1}x^{n-1}y + \binom{n}{2}x^{n-2}y^2 + \dots + \binom{n}{n-1}xy^{n-1} + \binom{n}{n}y^n$$

$$1 \binom{4}{2} = \frac{4!}{2! \cdot 2!} = \frac{4 \cdot 3 \cdot 2}{2 \cdot 2} = 6$$

1

0 1 0
0 1 1 0

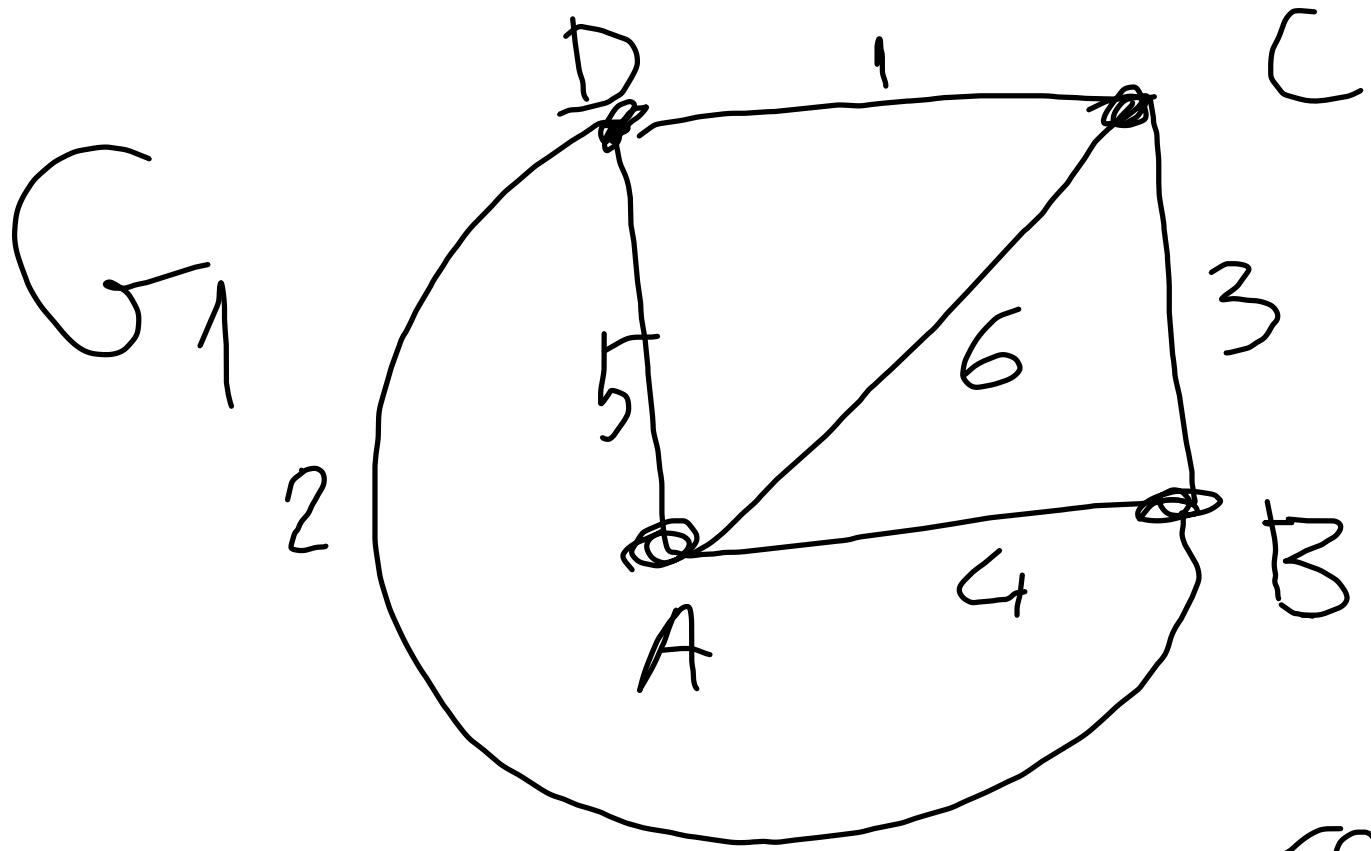
1 2 1

1 3 3 1

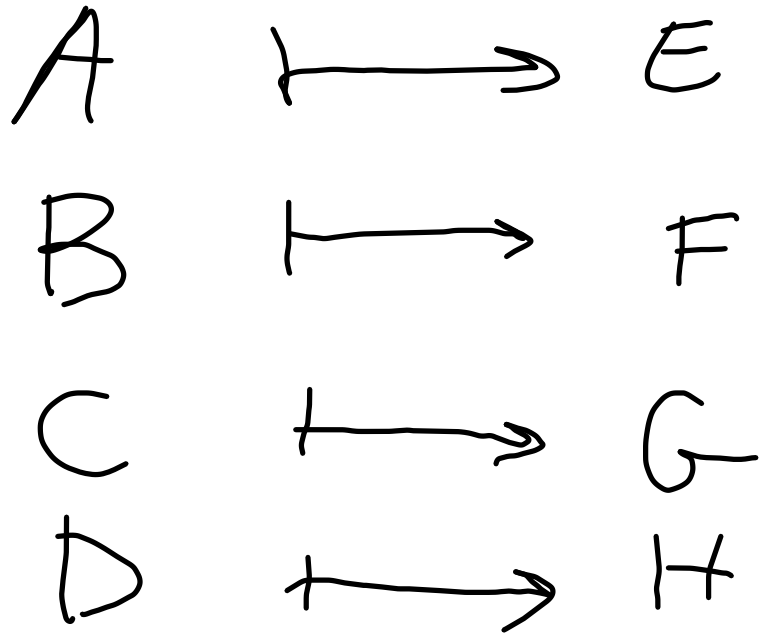
1 4 6 4 1

1 5 10 10 5 1

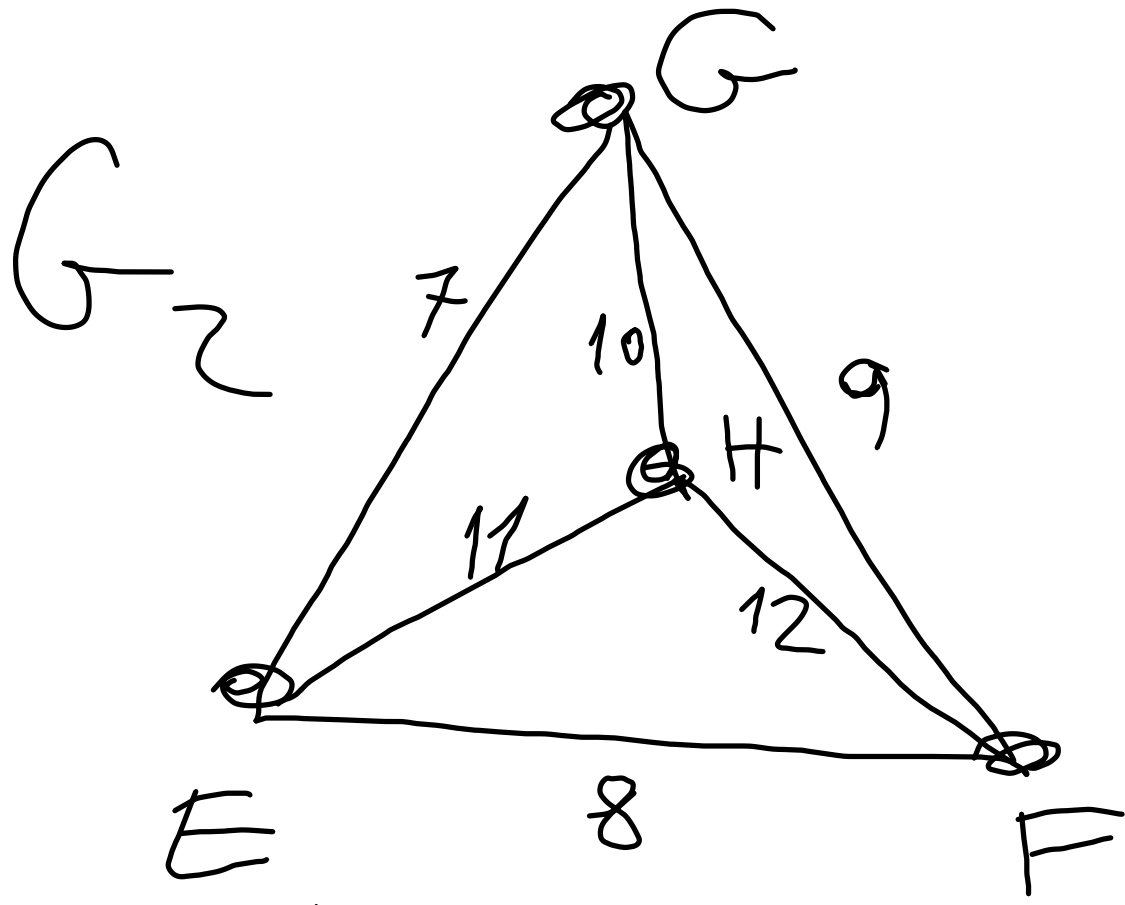
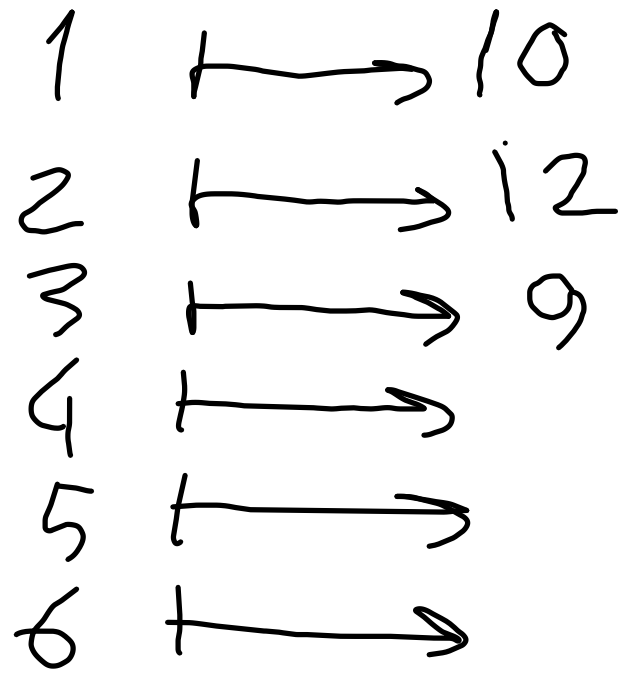
$\binom{2}{0}$ $\binom{2}{1}$ $\binom{2}{2}$
 $\binom{3}{0}$ $\binom{3}{1}$ $\binom{3}{2}$ $\binom{3}{3}$



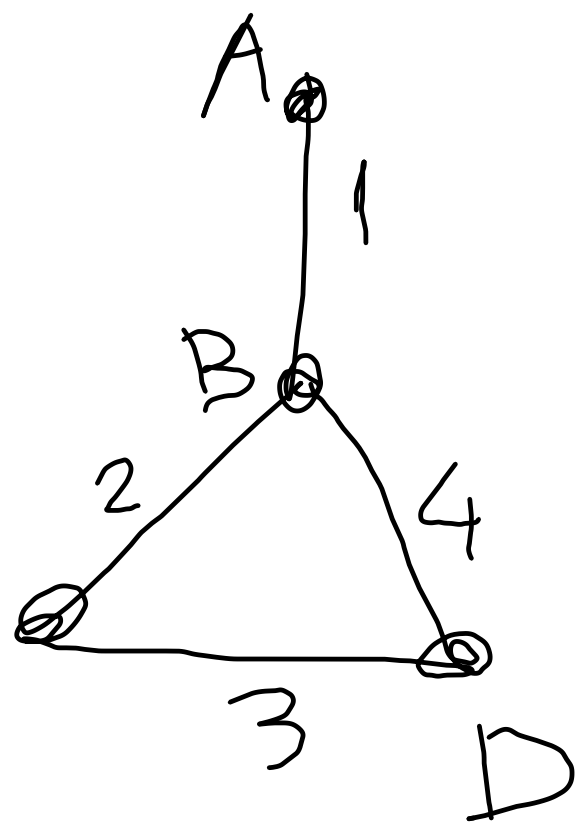
φ:



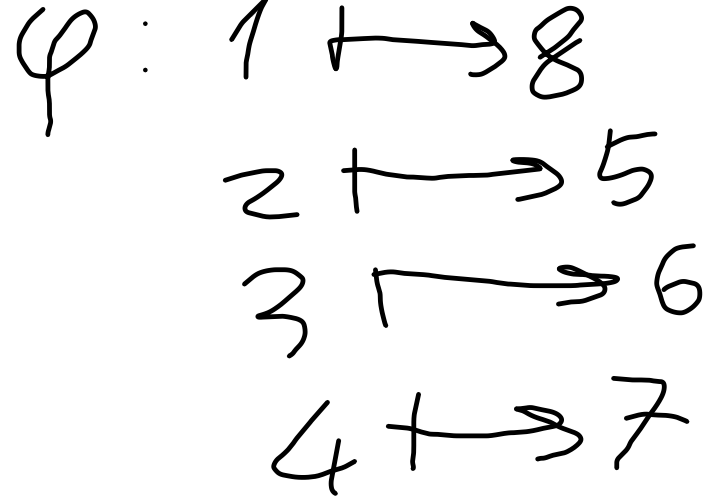
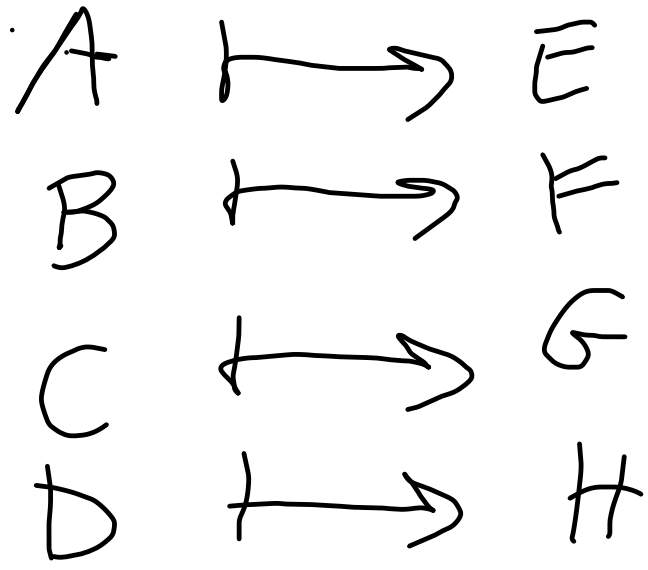
φ:



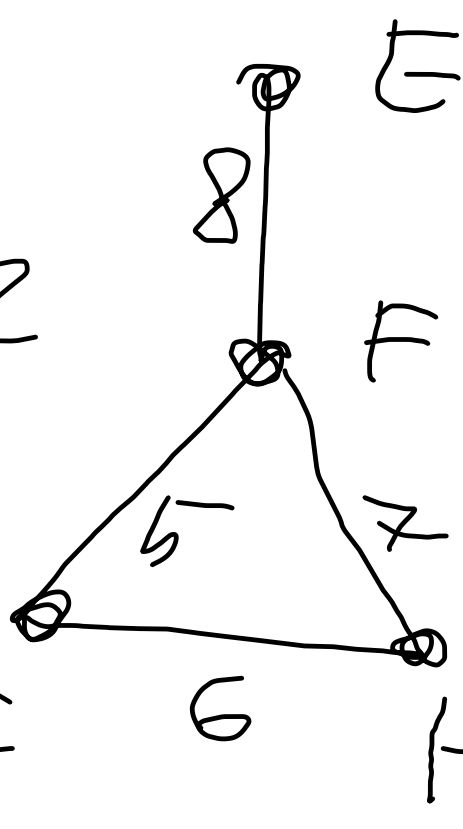
G_1



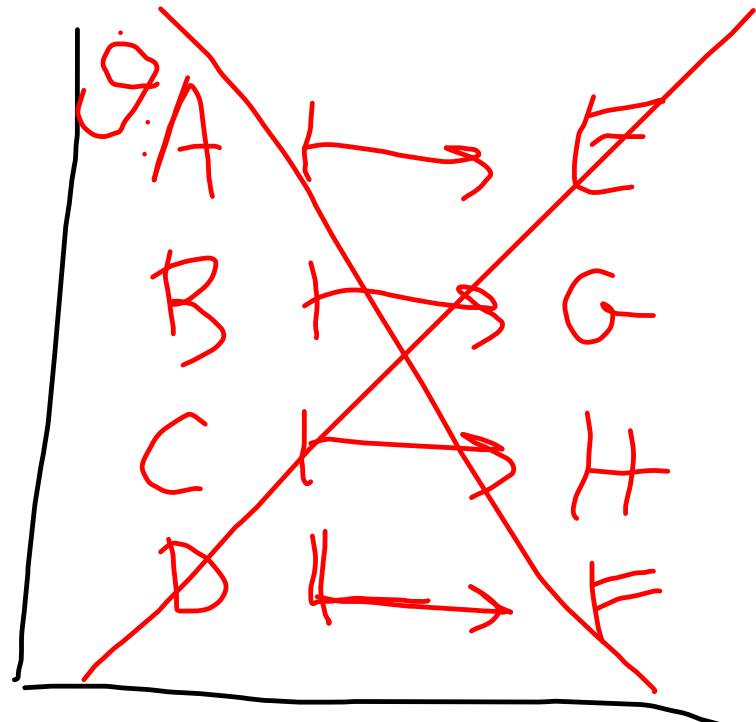
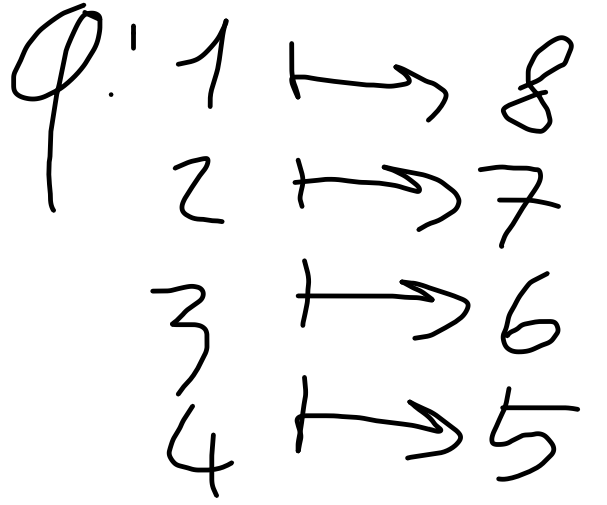
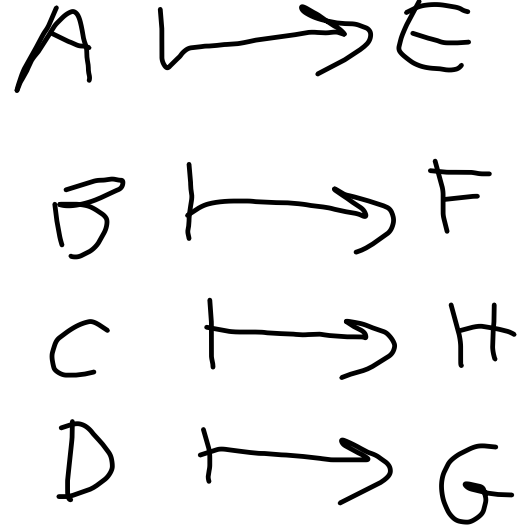
φ :



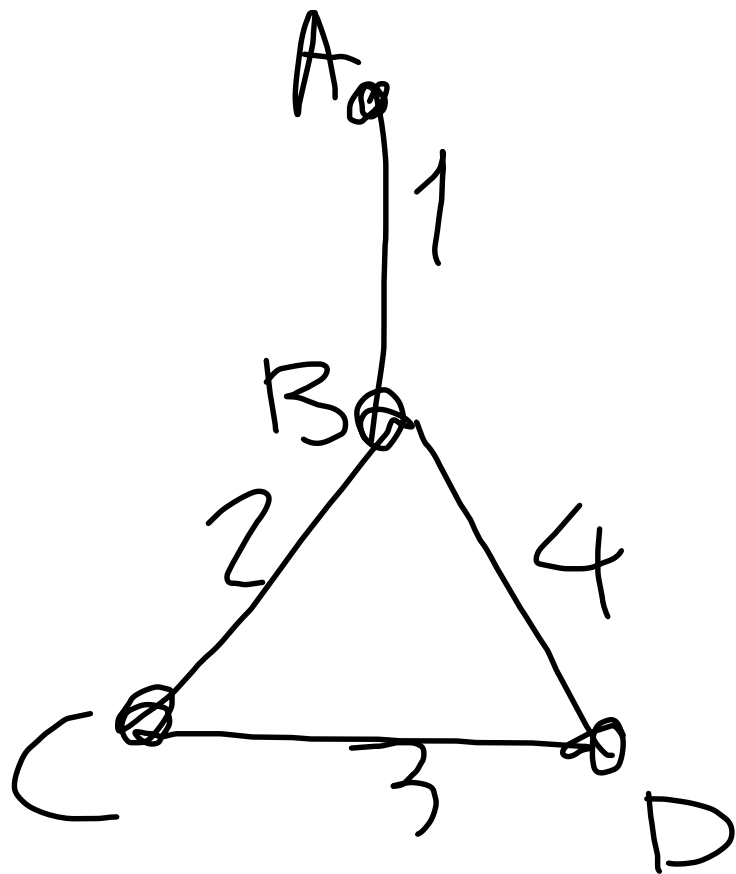
G_2



φ' :



Q: $A \mapsto A$
 $B \mapsto B$
 $C \mapsto C$
 $D \mapsto D$



φ: $1 \mapsto 1$
 $2 \mapsto 2$
 $3 \mapsto 3$
 $4 \mapsto 4$

Q: $A \mapsto A$
 $B \mapsto B$
 $C \mapsto D$
 $D \mapsto C$

