

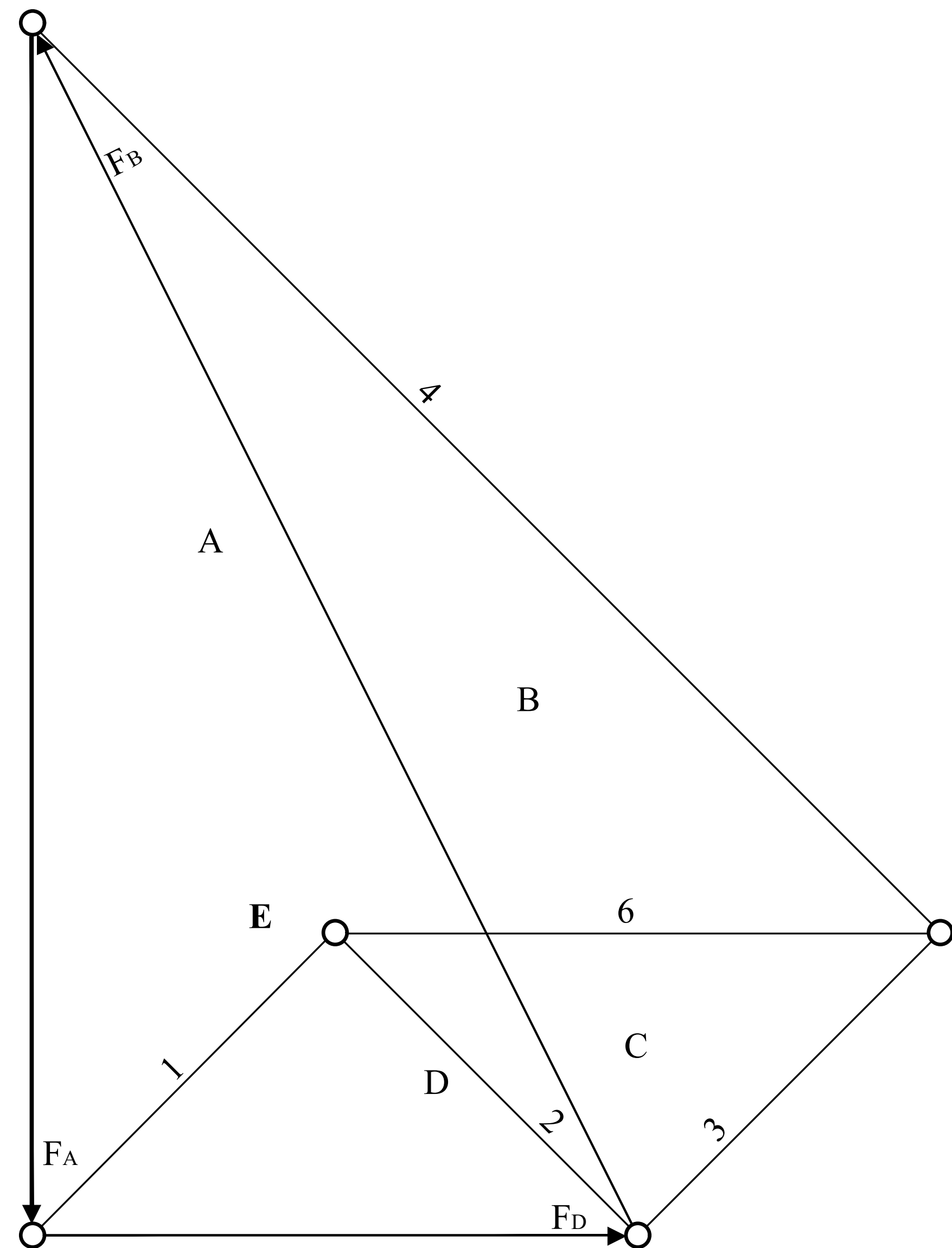
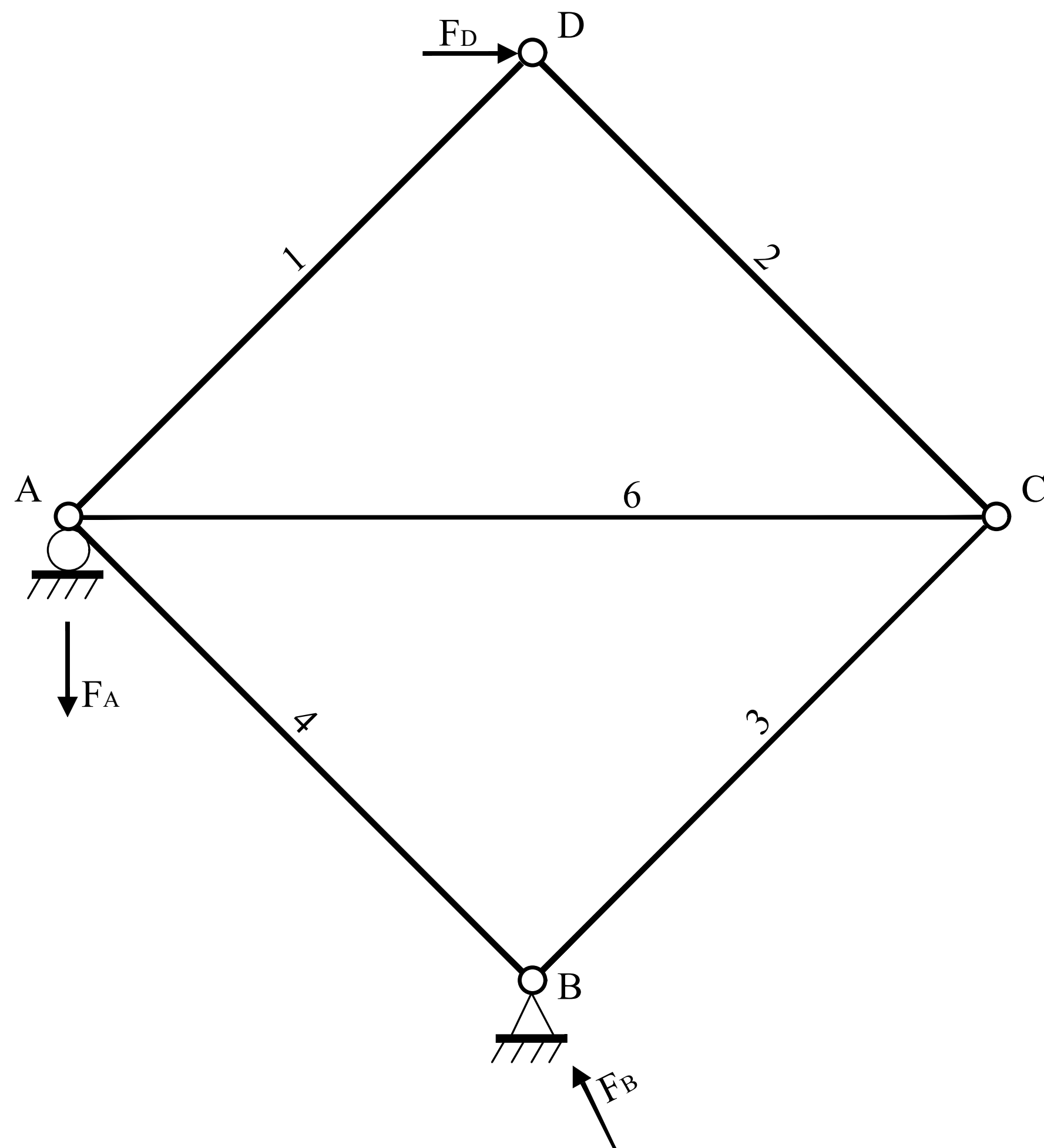


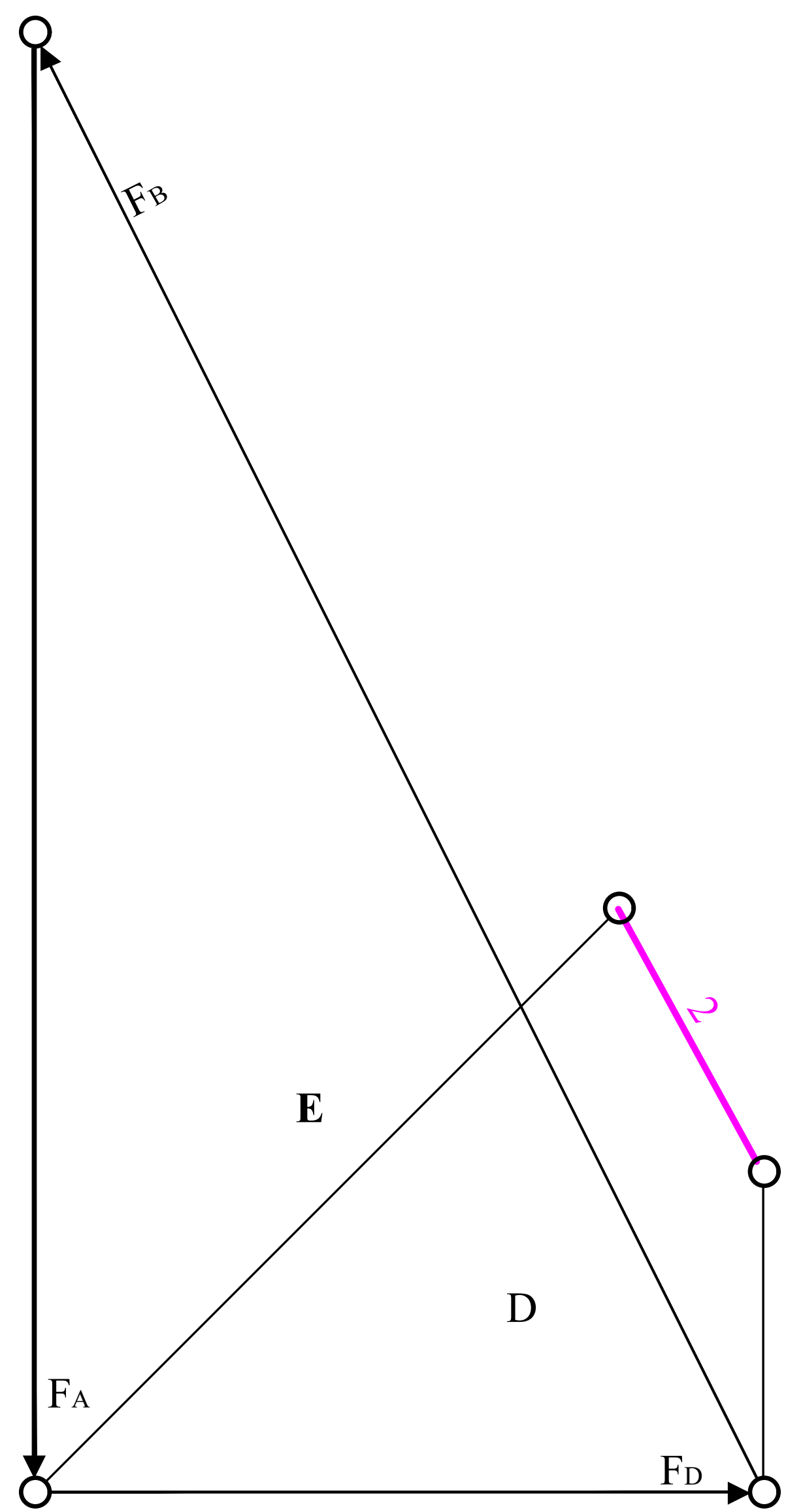
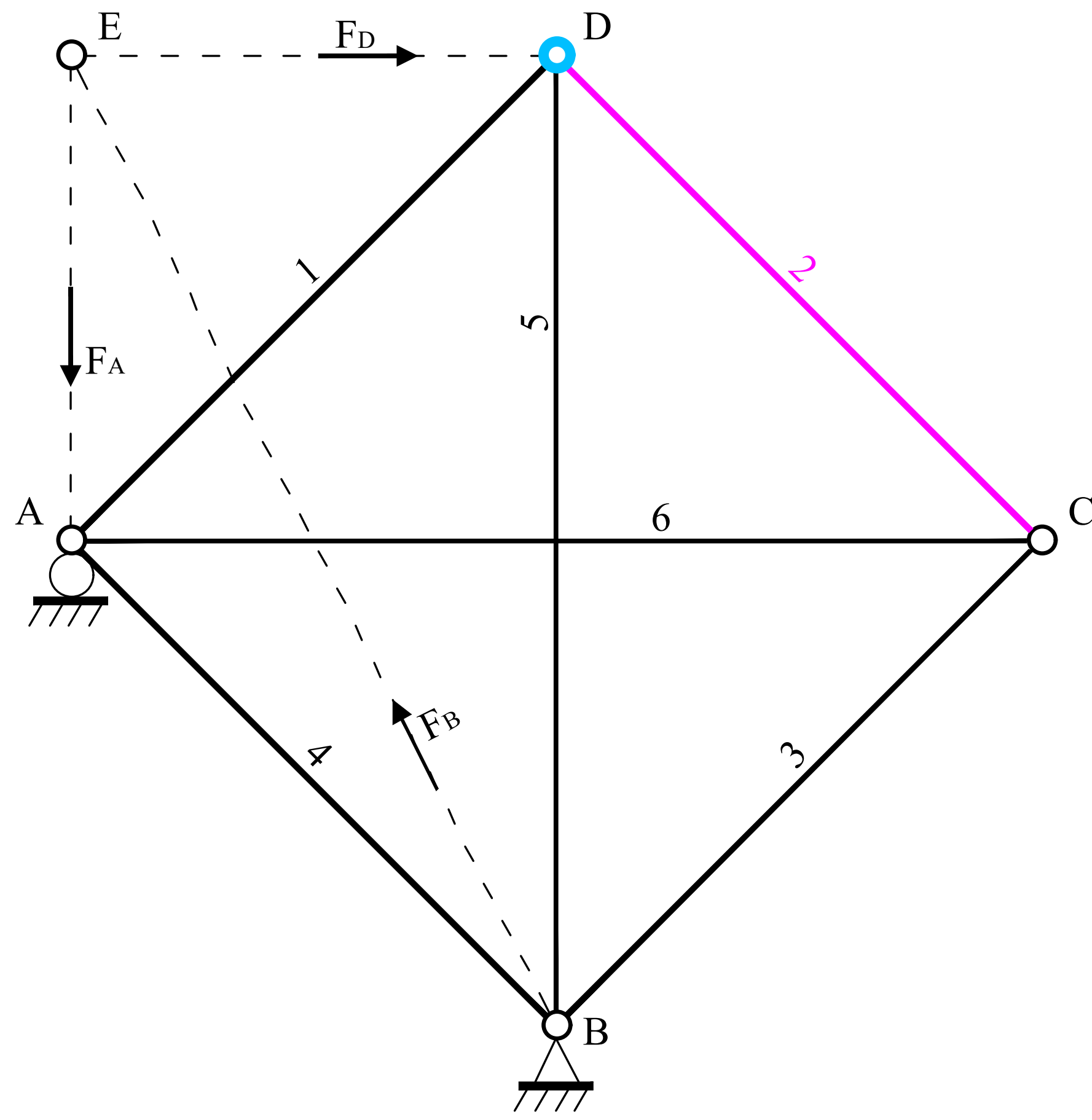
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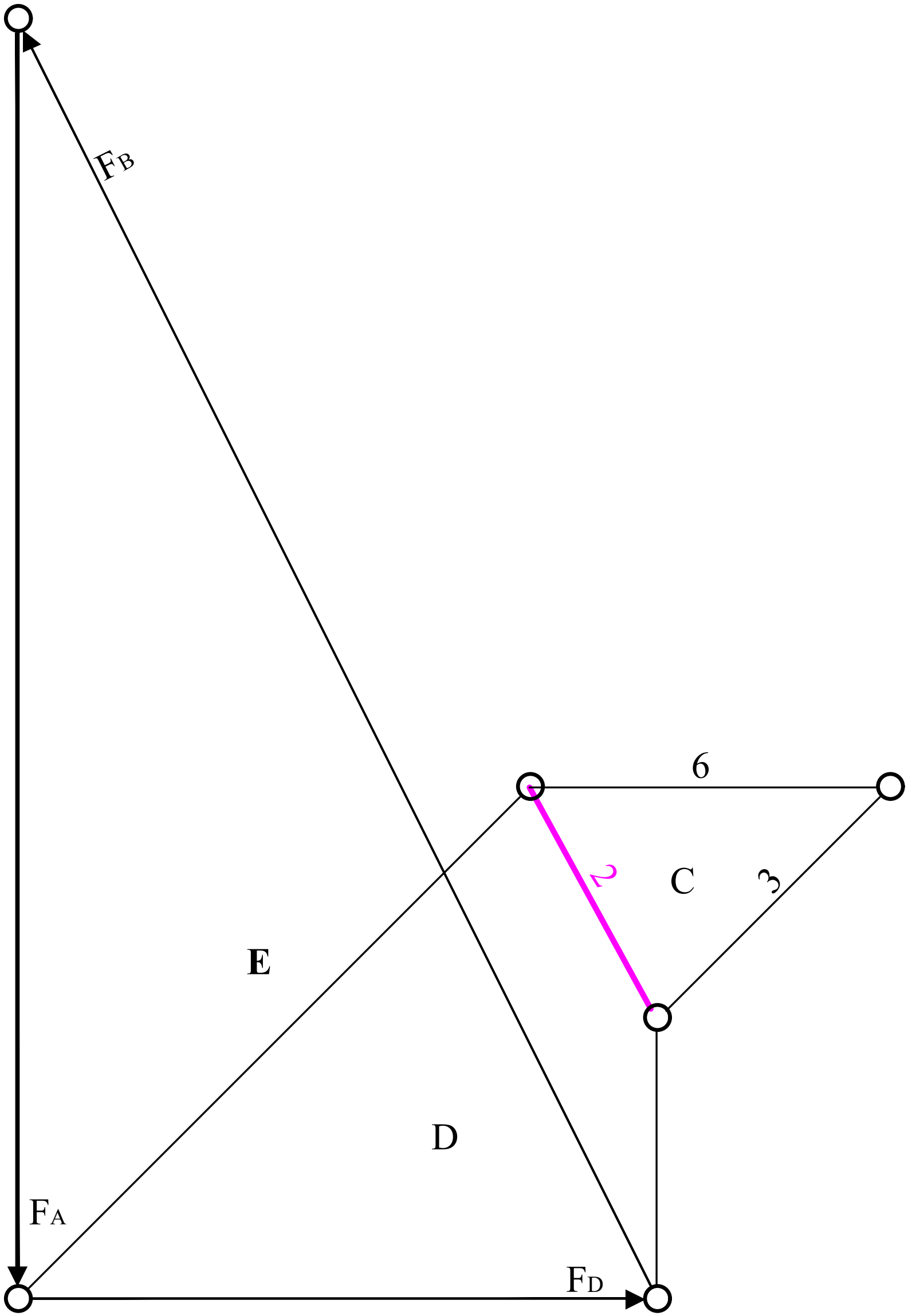
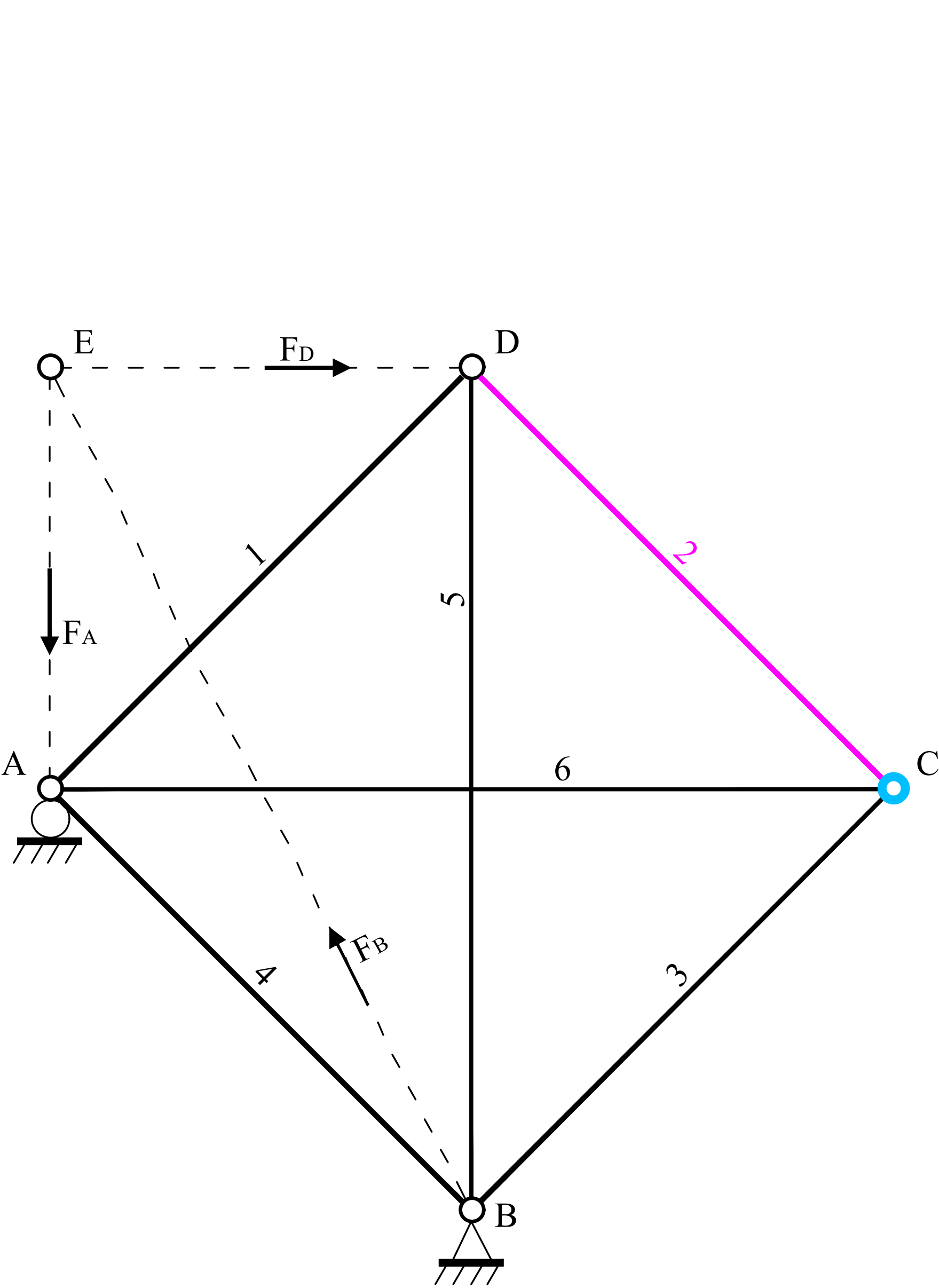
GRAPHIC STATICS @ STRUCTURES & TECHNOLOGIES

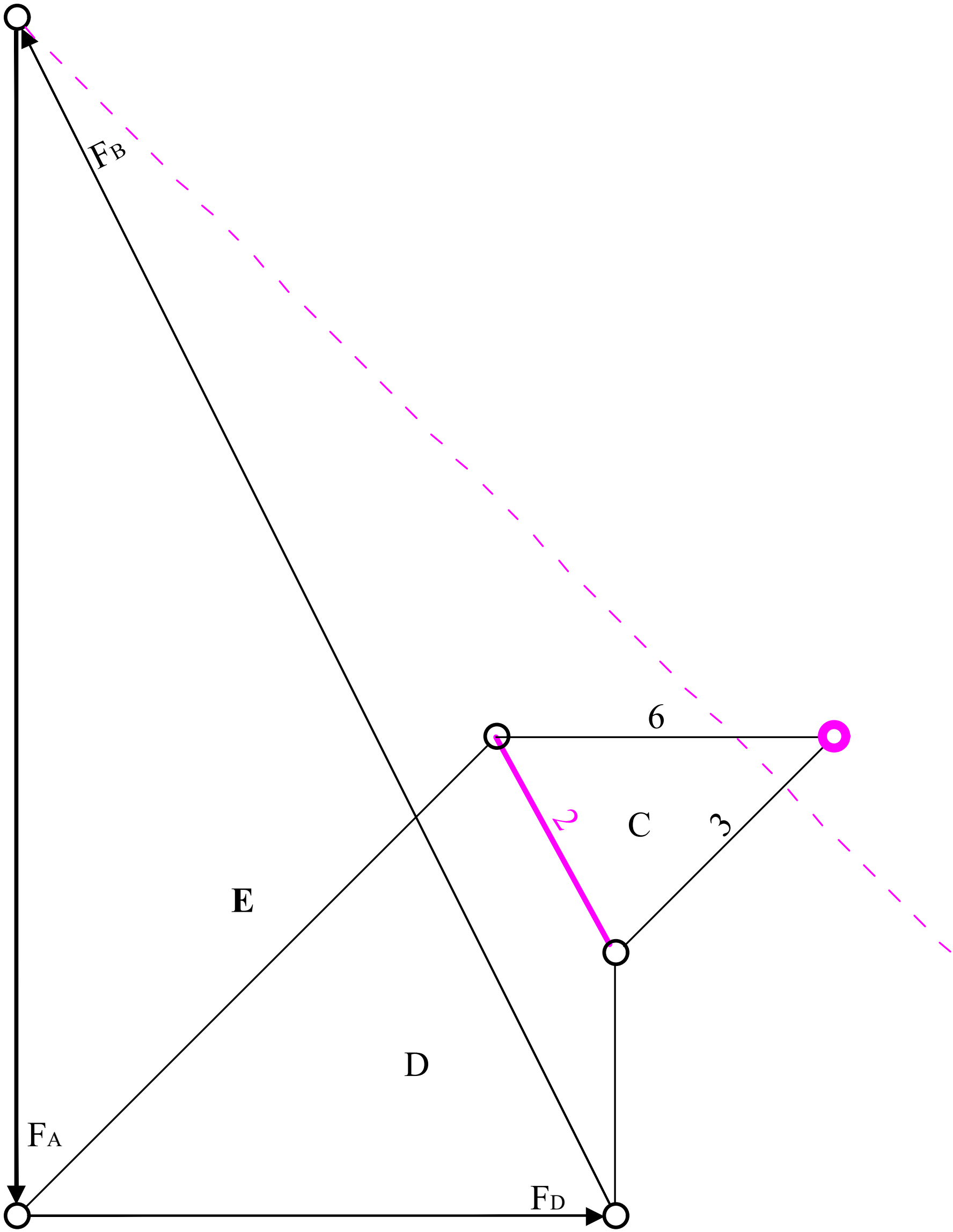
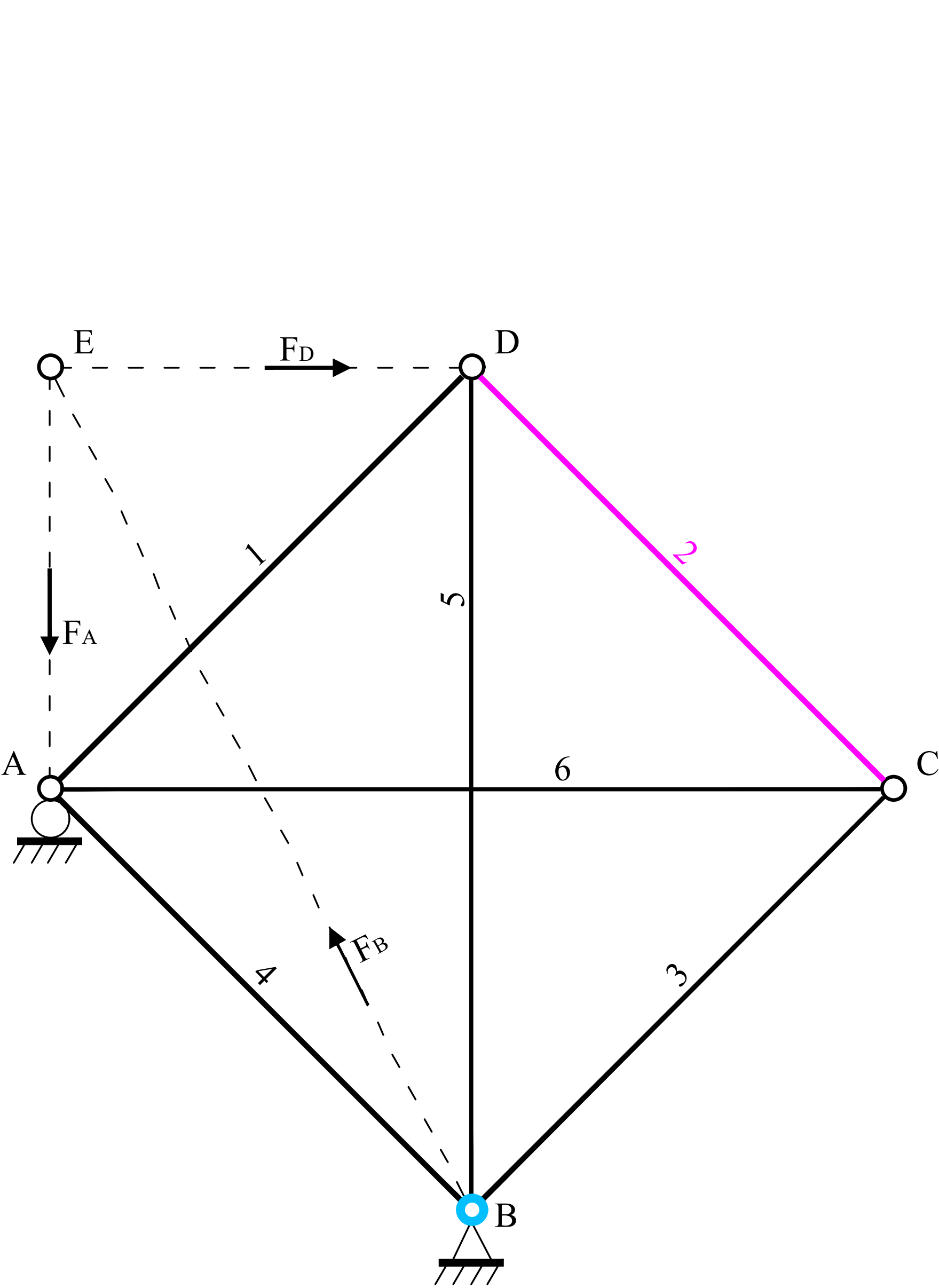


1/
CARACTÈRE INTUITIF PHYSIQUE









TREILLIS - CONSTRUCTION DES POLYGÔNES

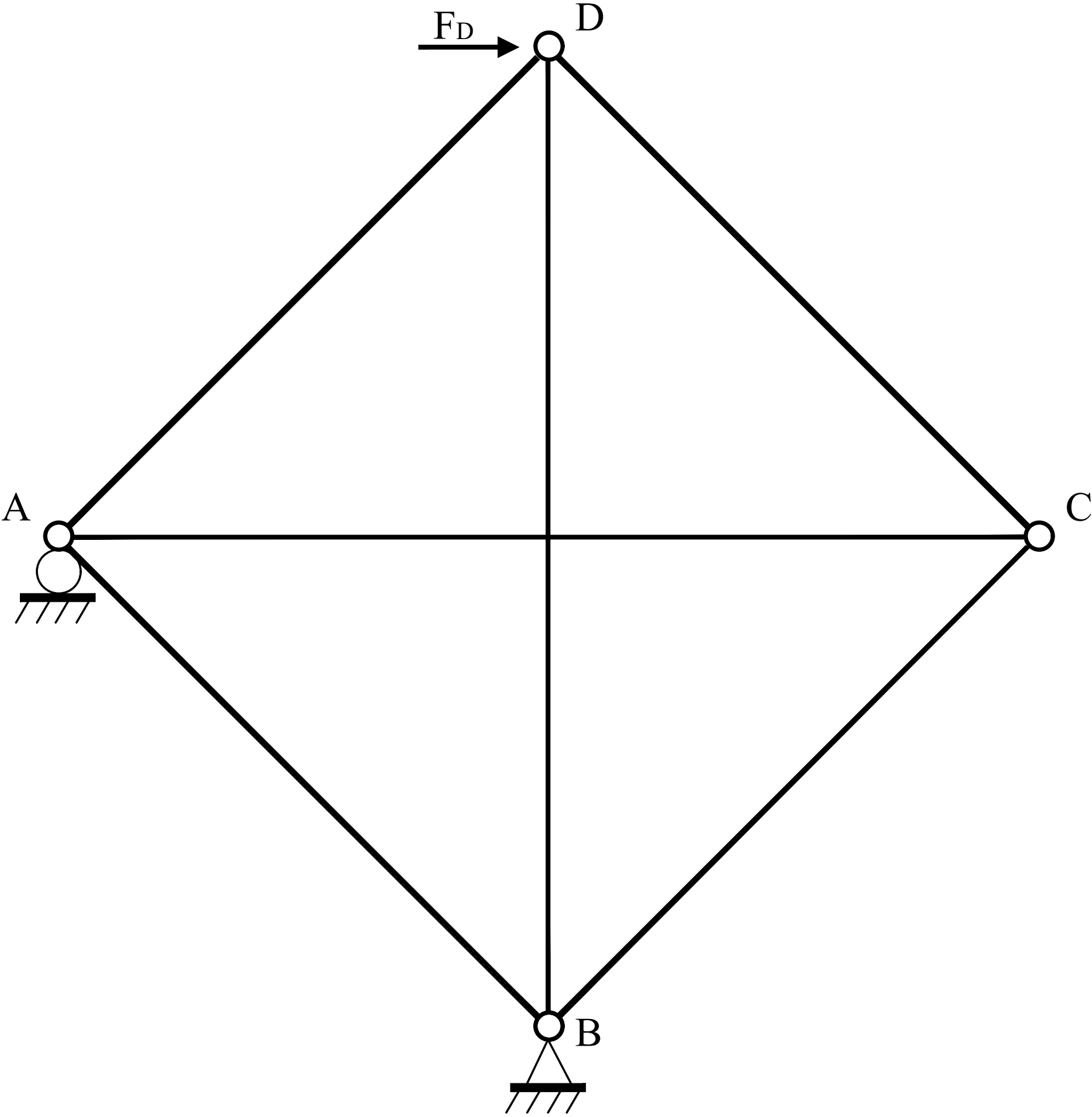


DIAGRAMME DES SITUATIONS

DIAGRAMME DES FORCES

TREILLIS - CONSTRUCTION DES POLYGÔNES

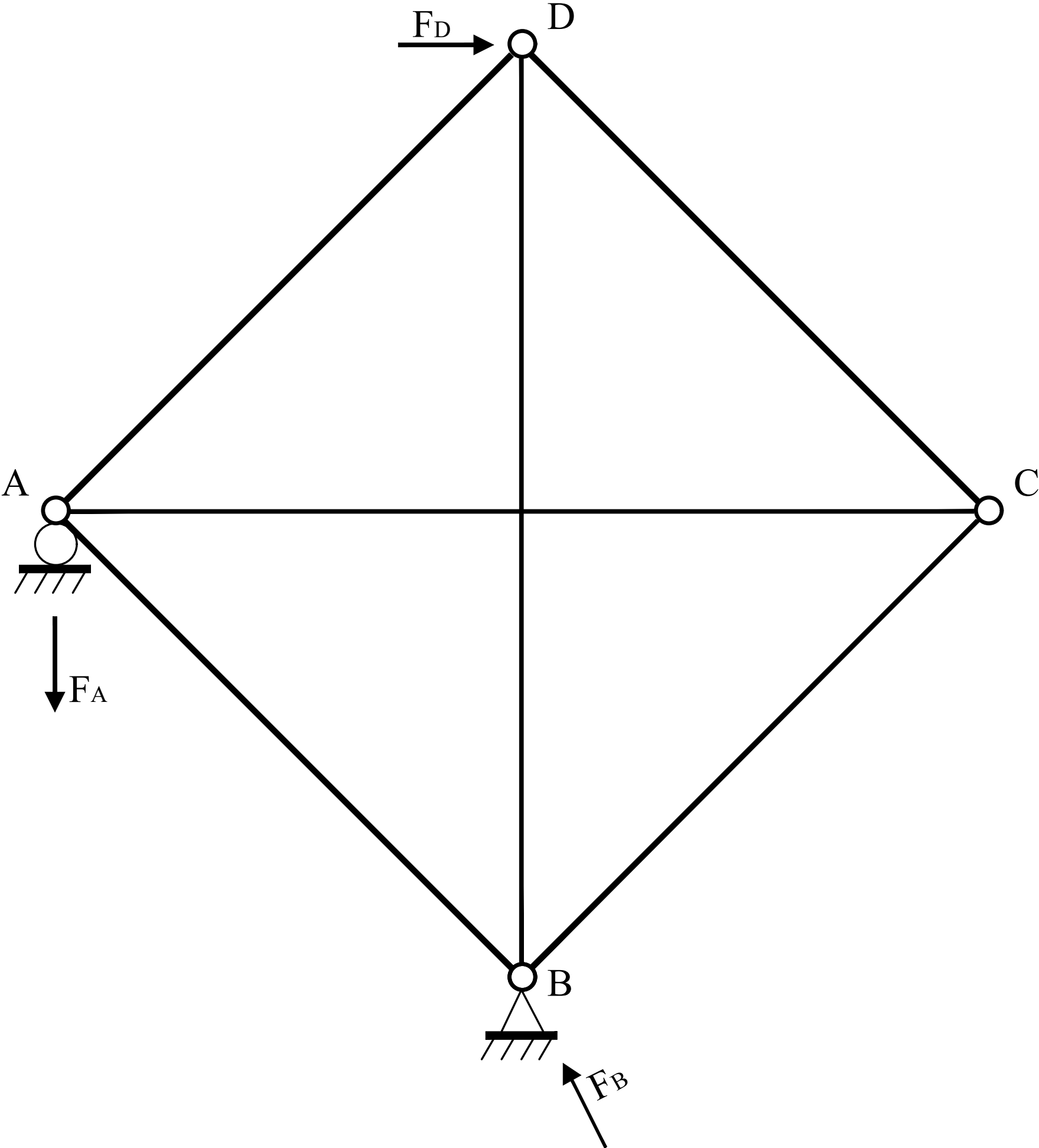


DIAGRAMME DES SITUATIONS

DIAGRAMME DES FORCES

TREILLIS - CONSTRUCTION DES POLYGÔNES

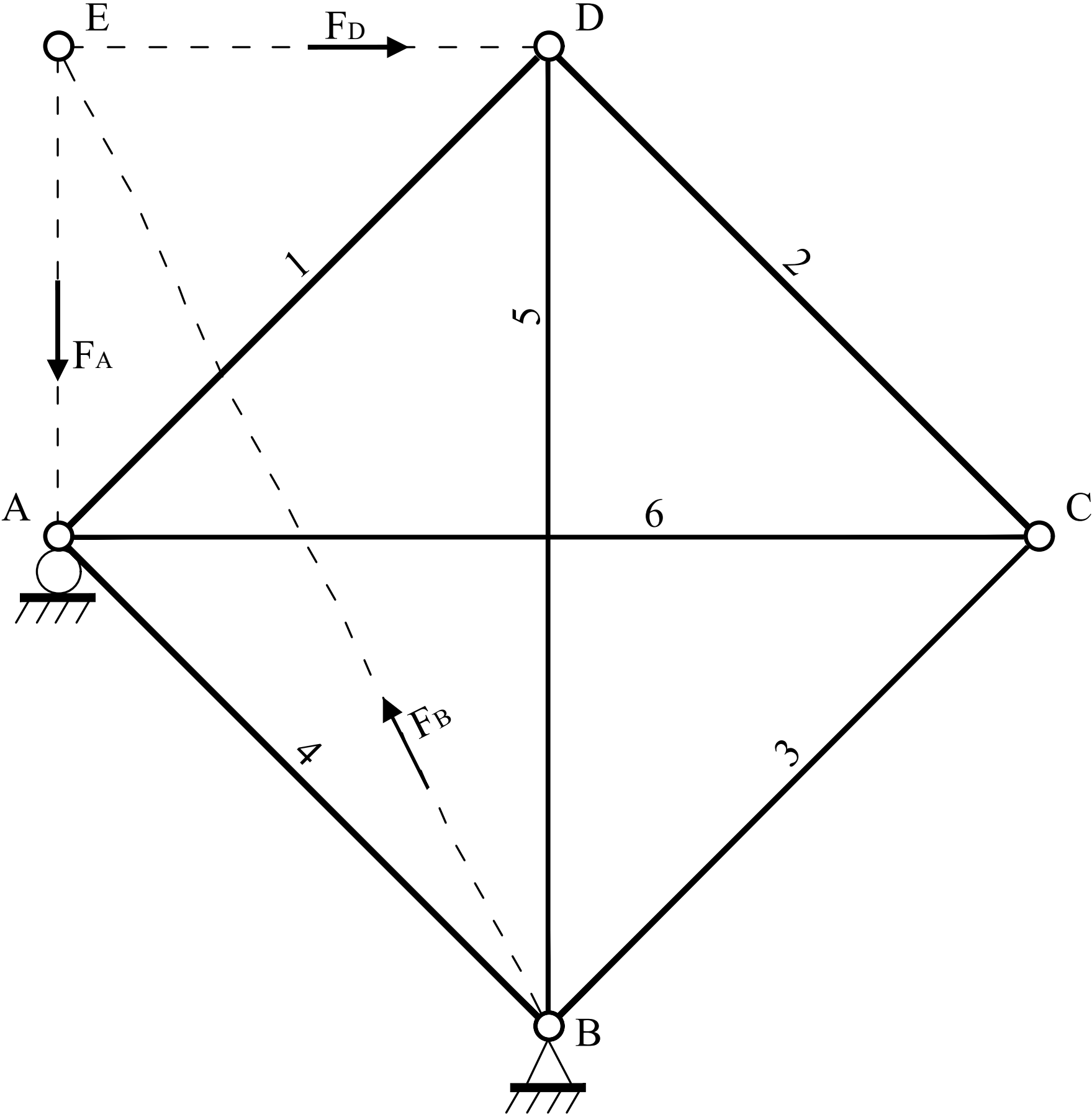


DIAGRAMME DES SITUATIONS

DIAGRAMME DES FORCES

TREILLIS - CONSTRUCTION DES POLYGÔNES

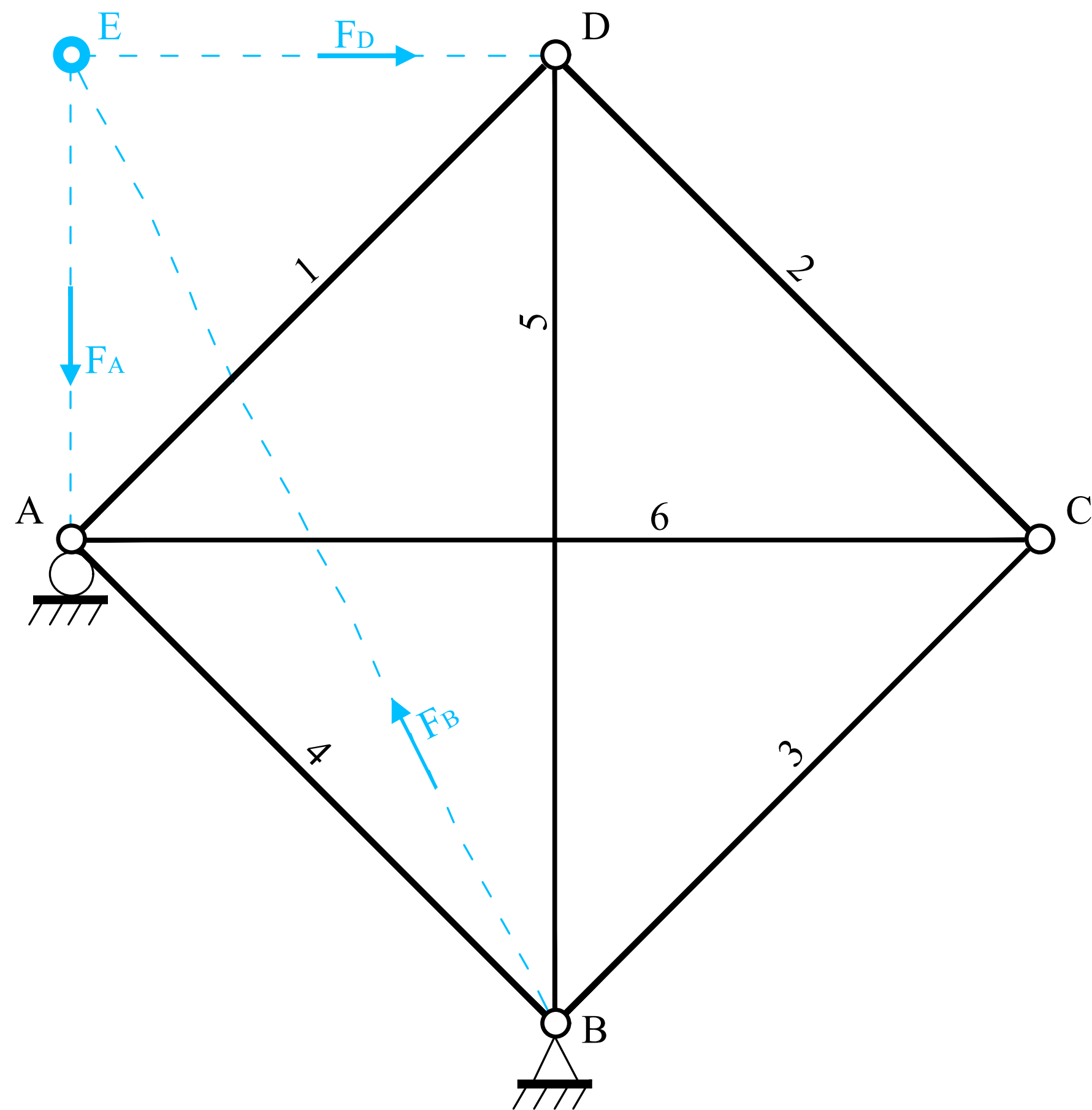


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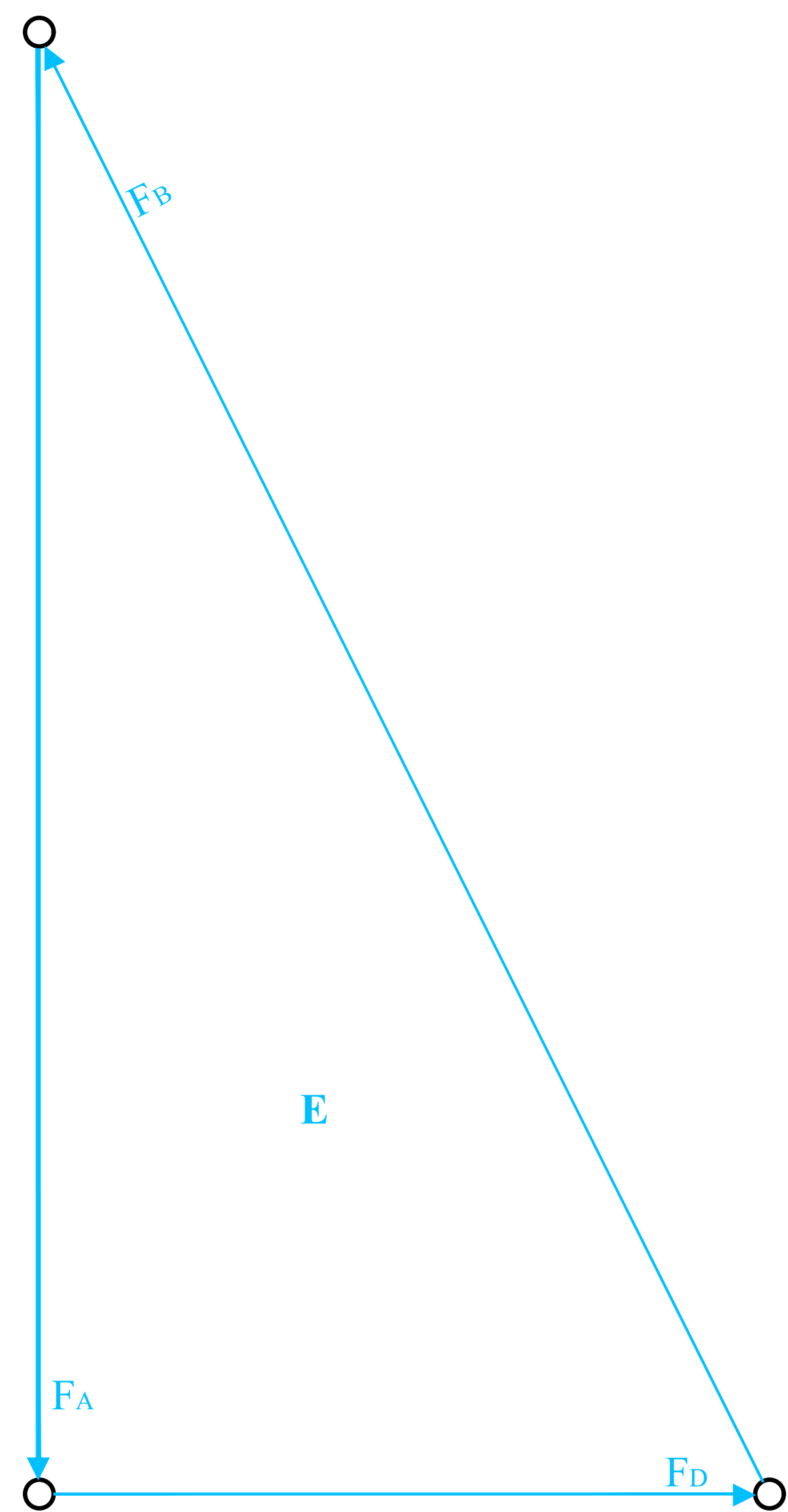


DIAGRAMME DES FORCES

TREILLIS - CONSTRUCTION DES POLYGÔNES

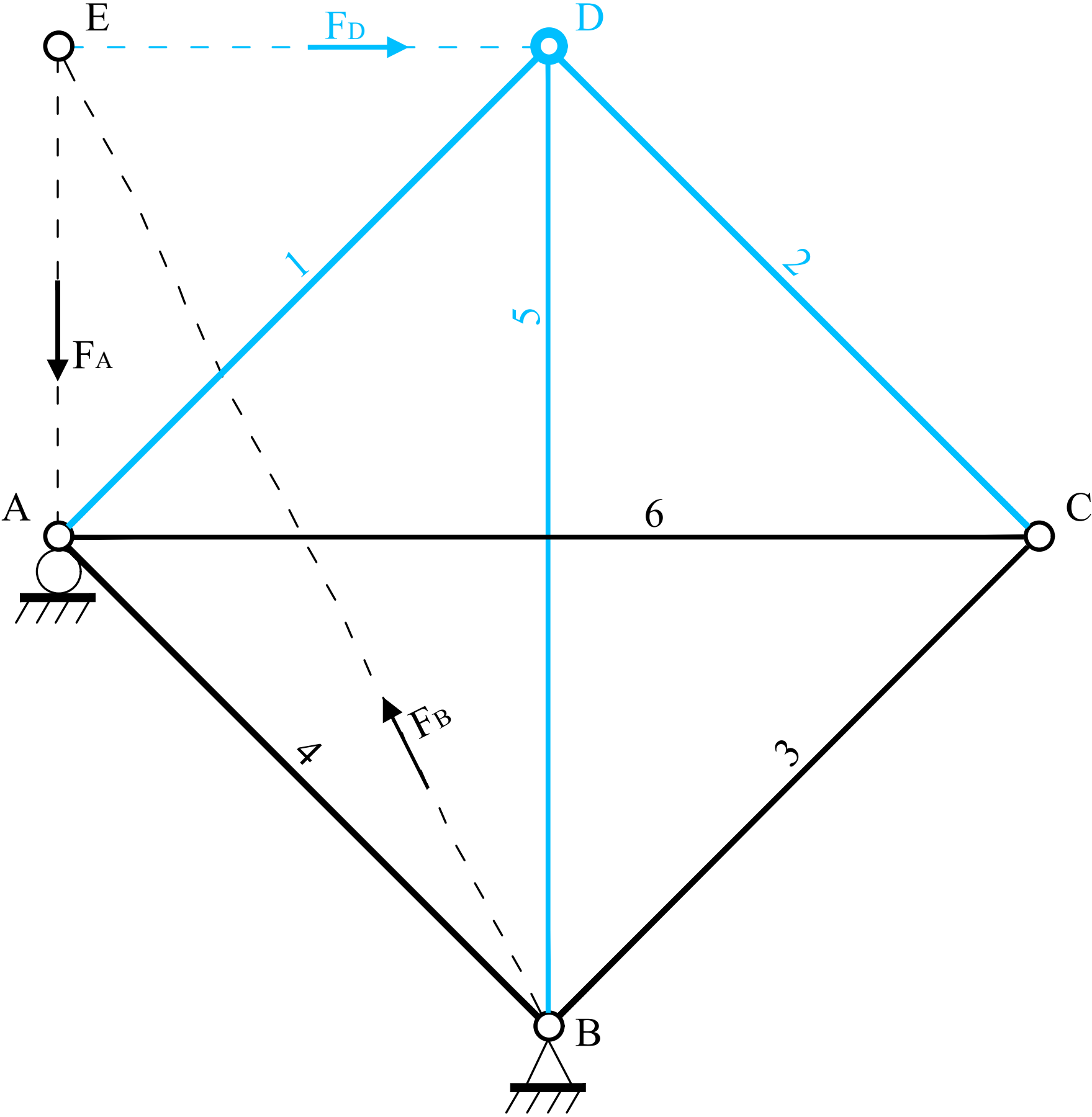


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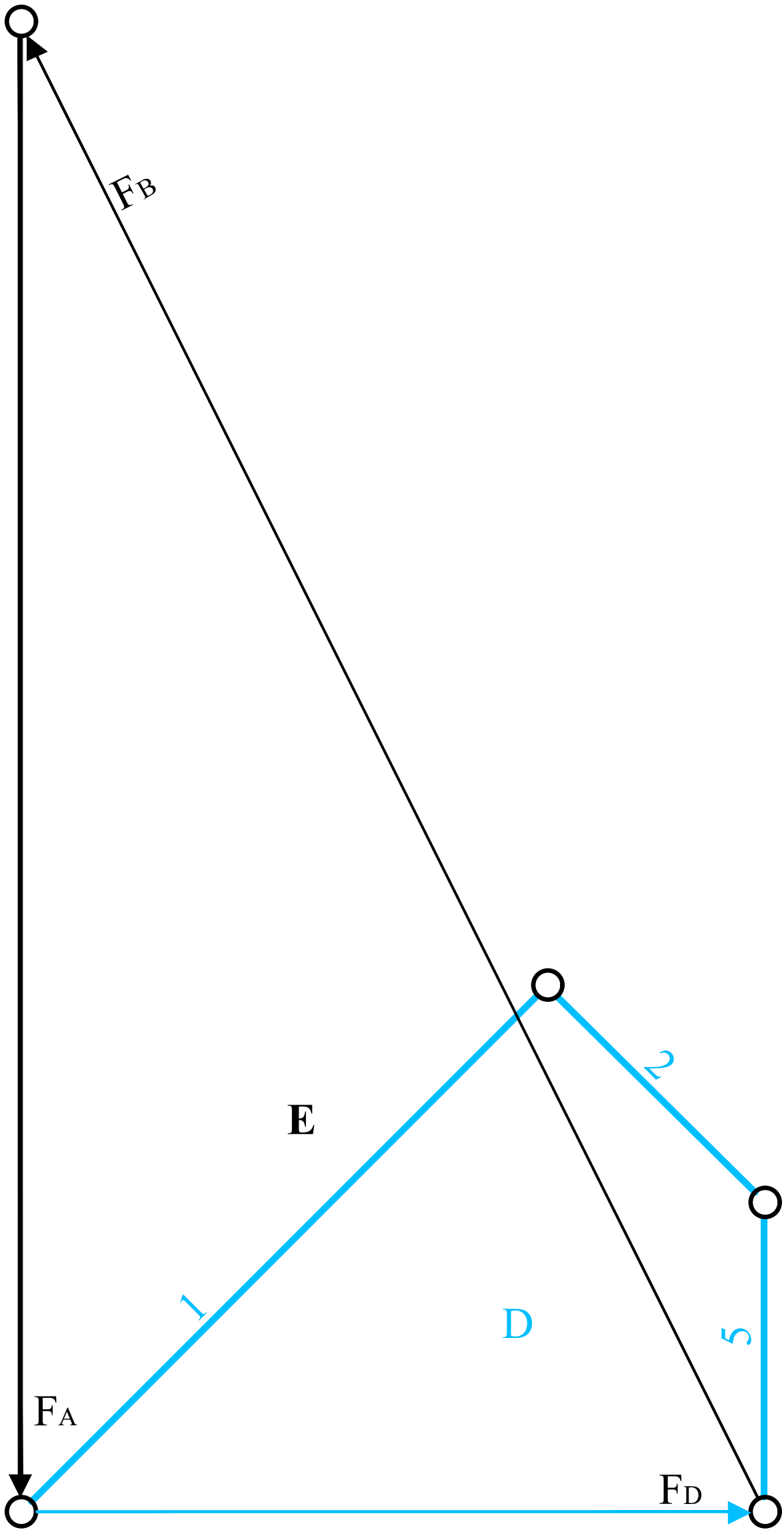


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TREILLIS - CONSTRUCTION DES POLYGÔNES

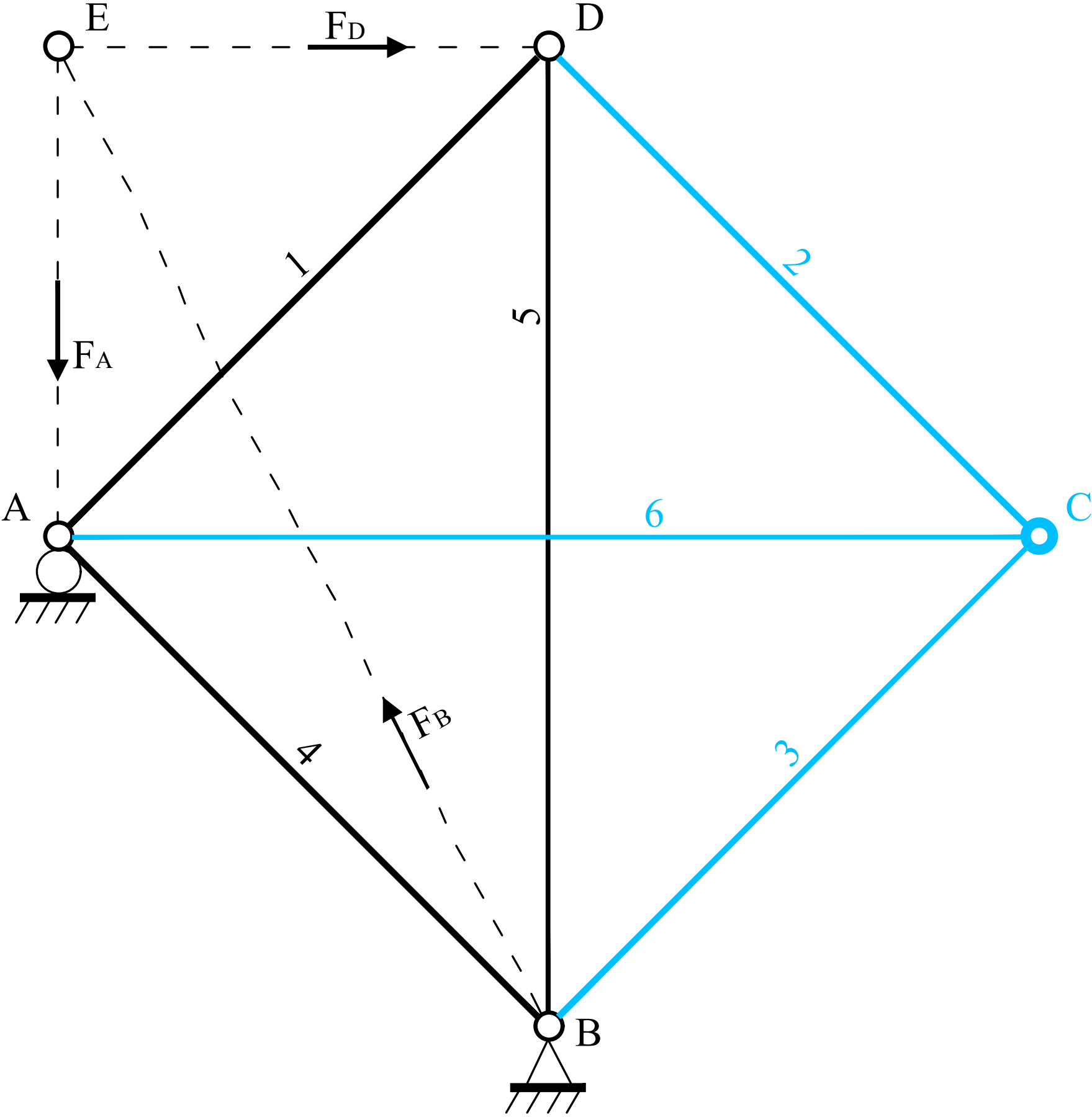


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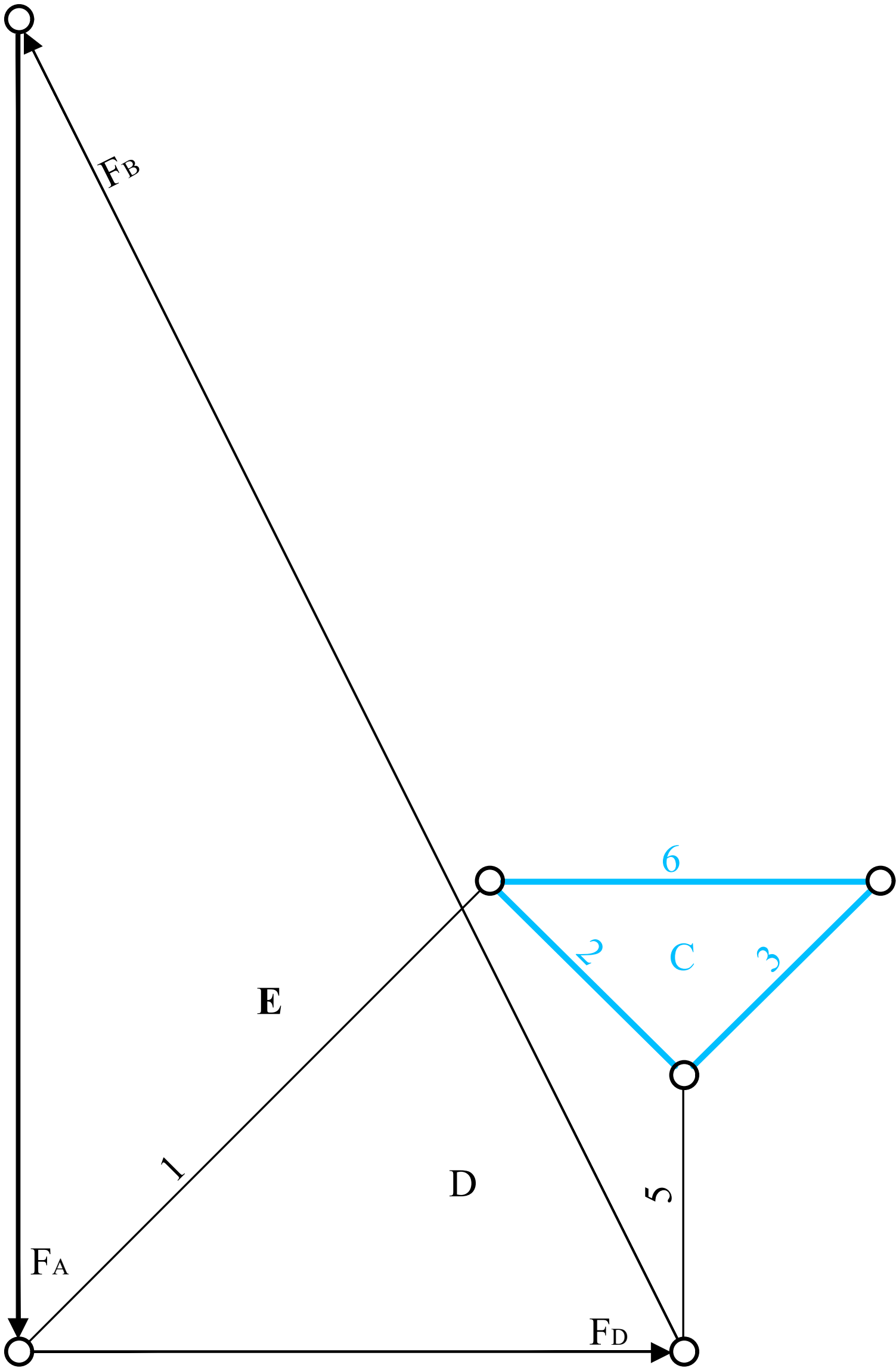


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TREILLIS - CONSTRUCTION DES POLYGÔNES

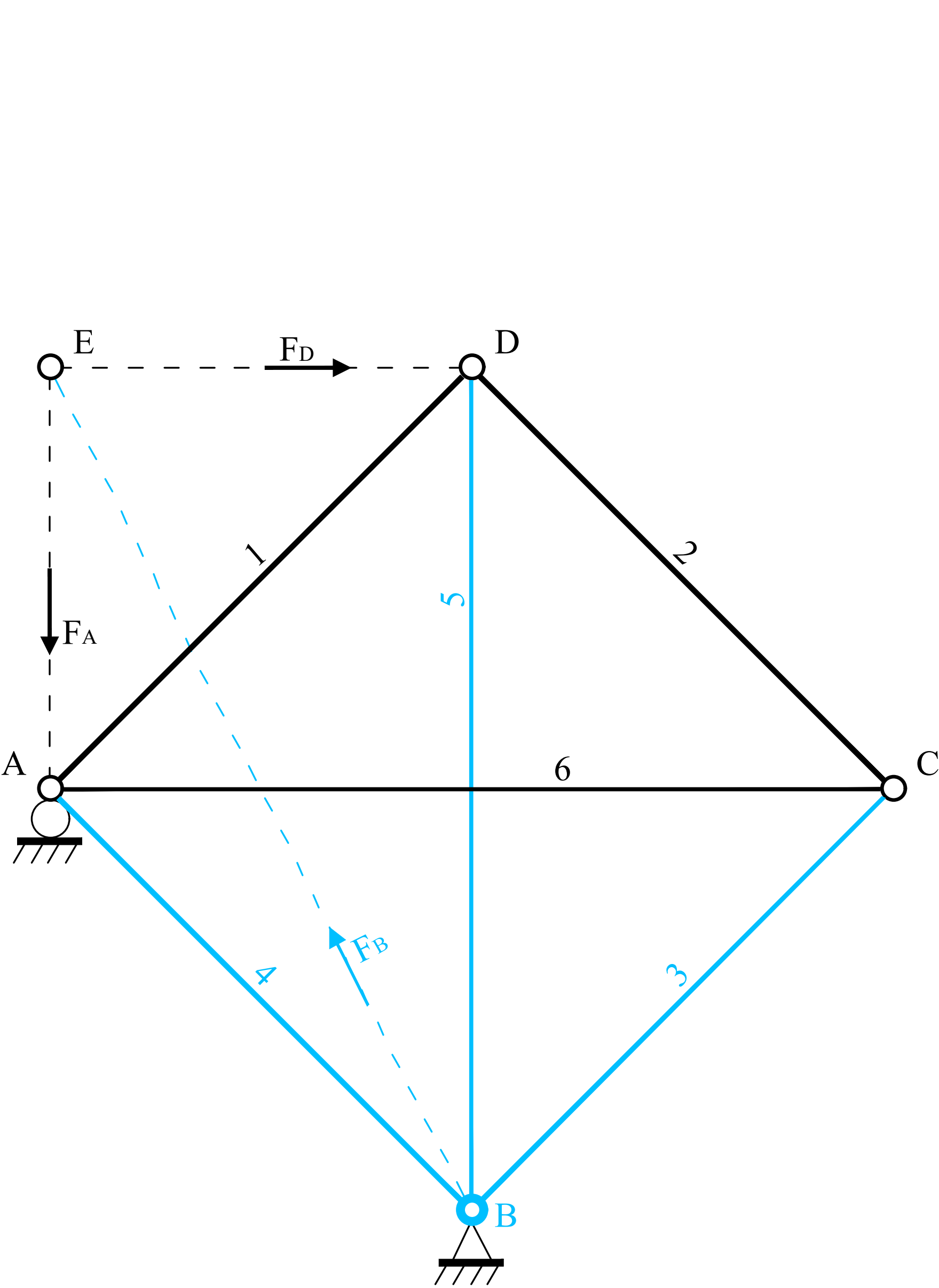


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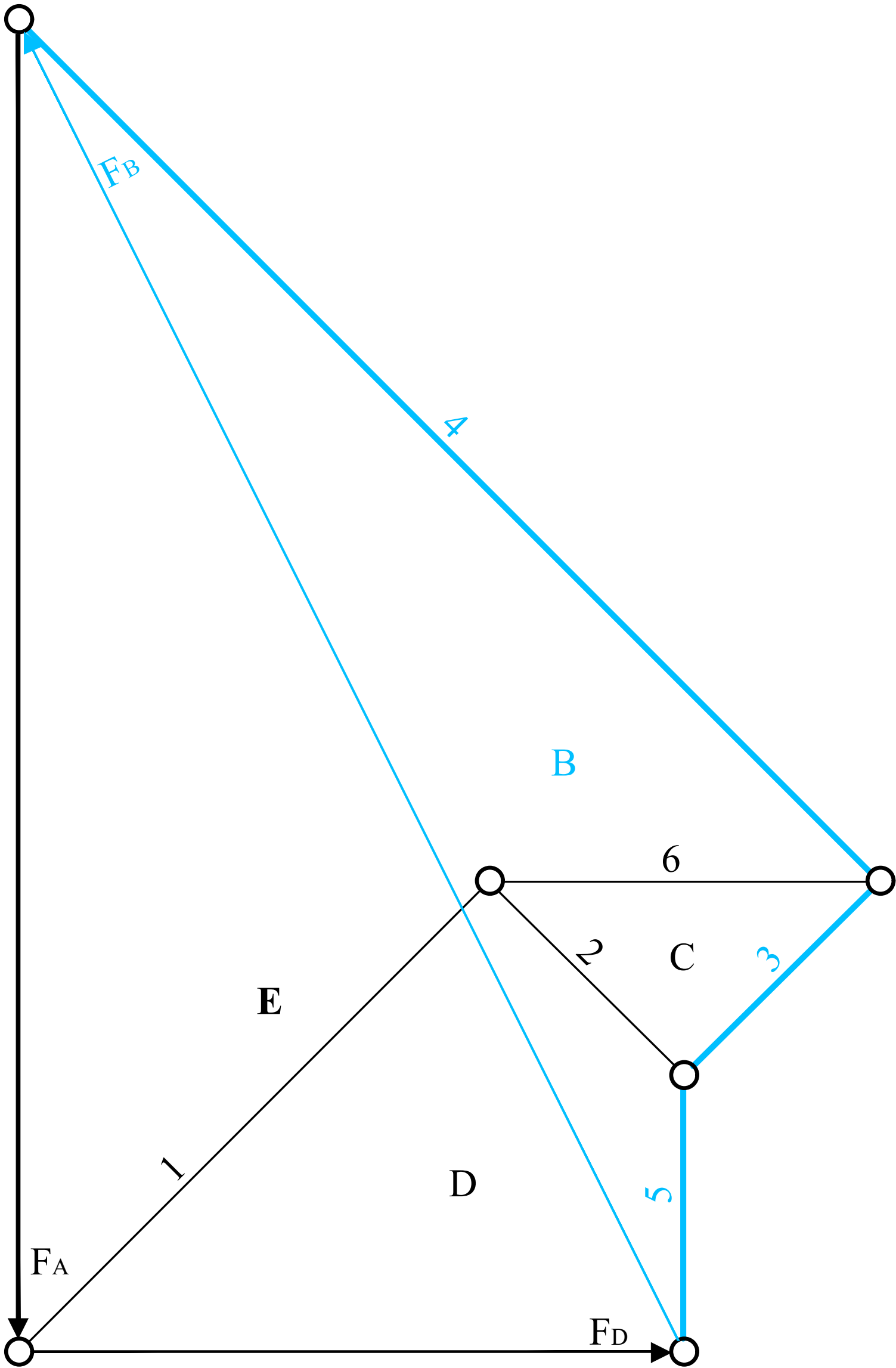


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TREILLIS - CONSTRUCTION DES POLYGÔNES

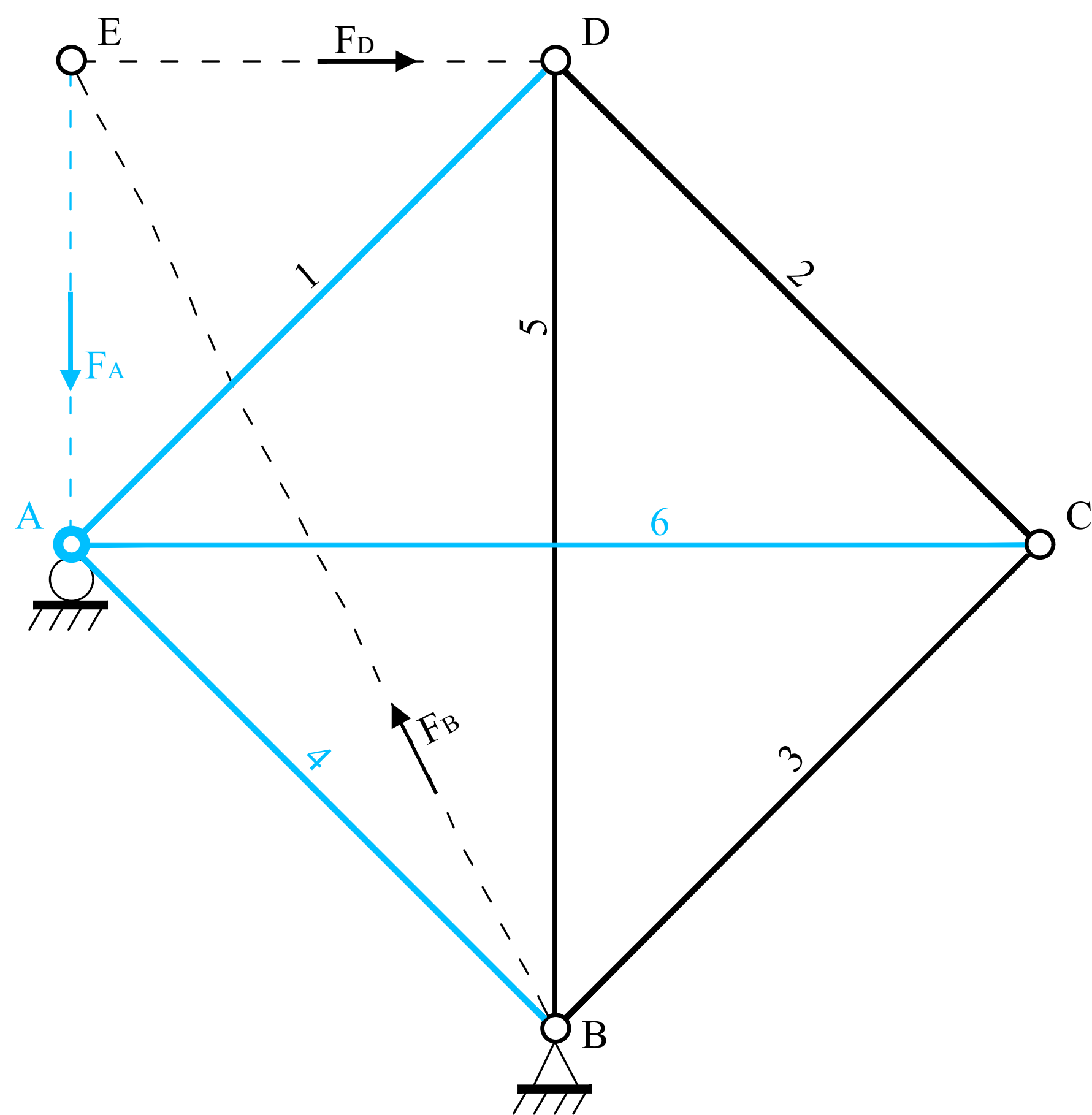


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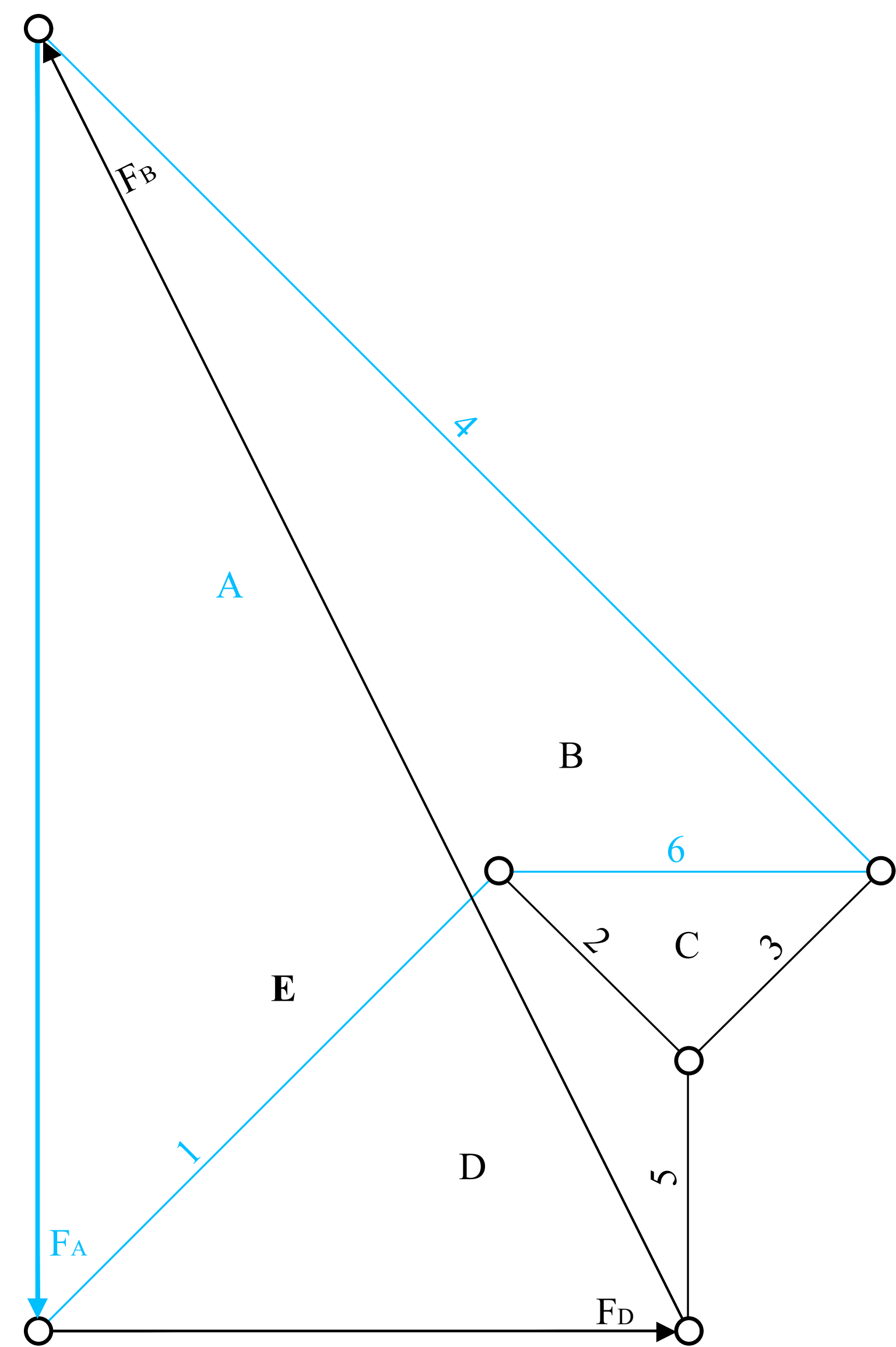


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TREILLIS - CONSTRUCTION DES POLYGÔNES

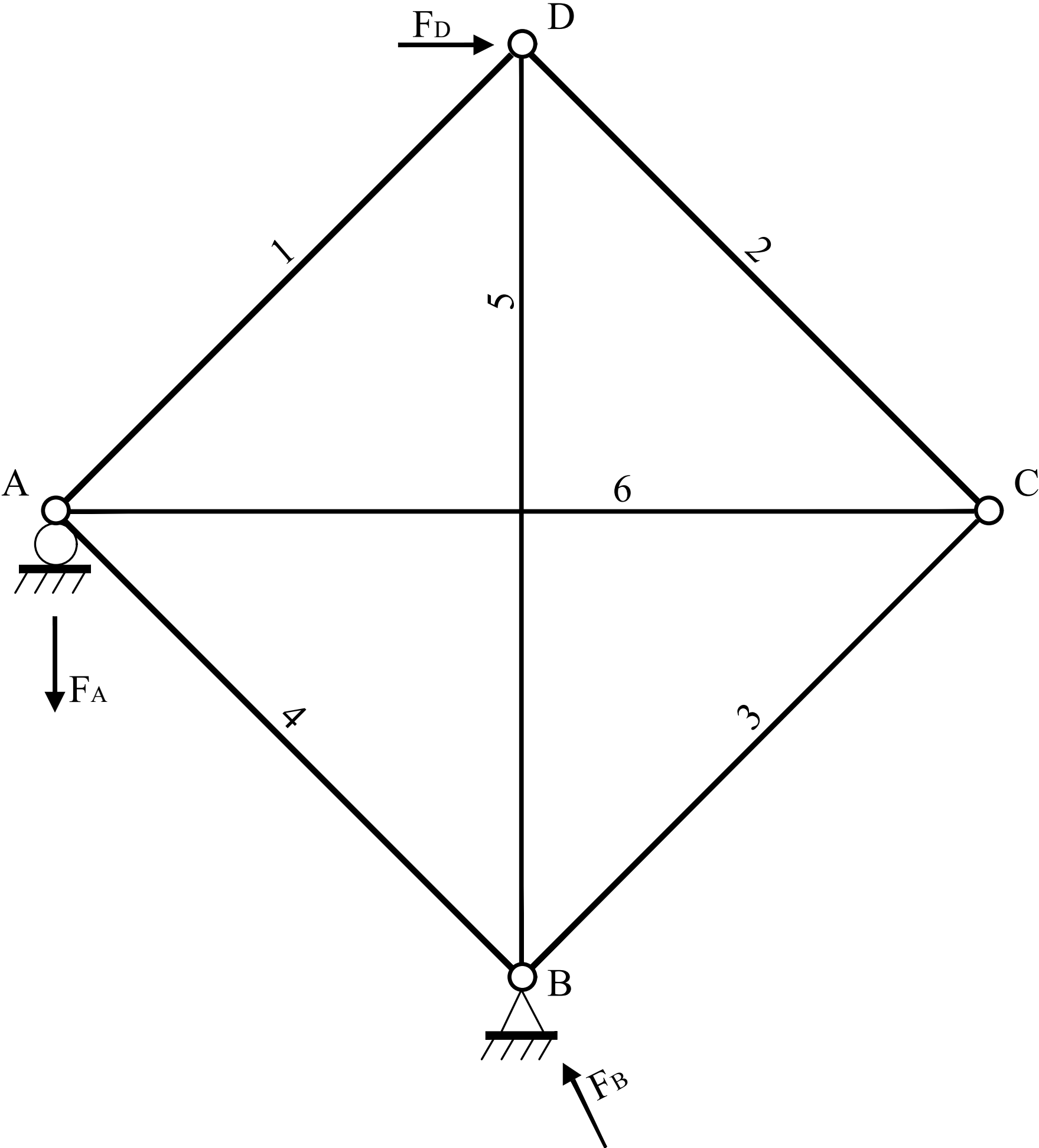


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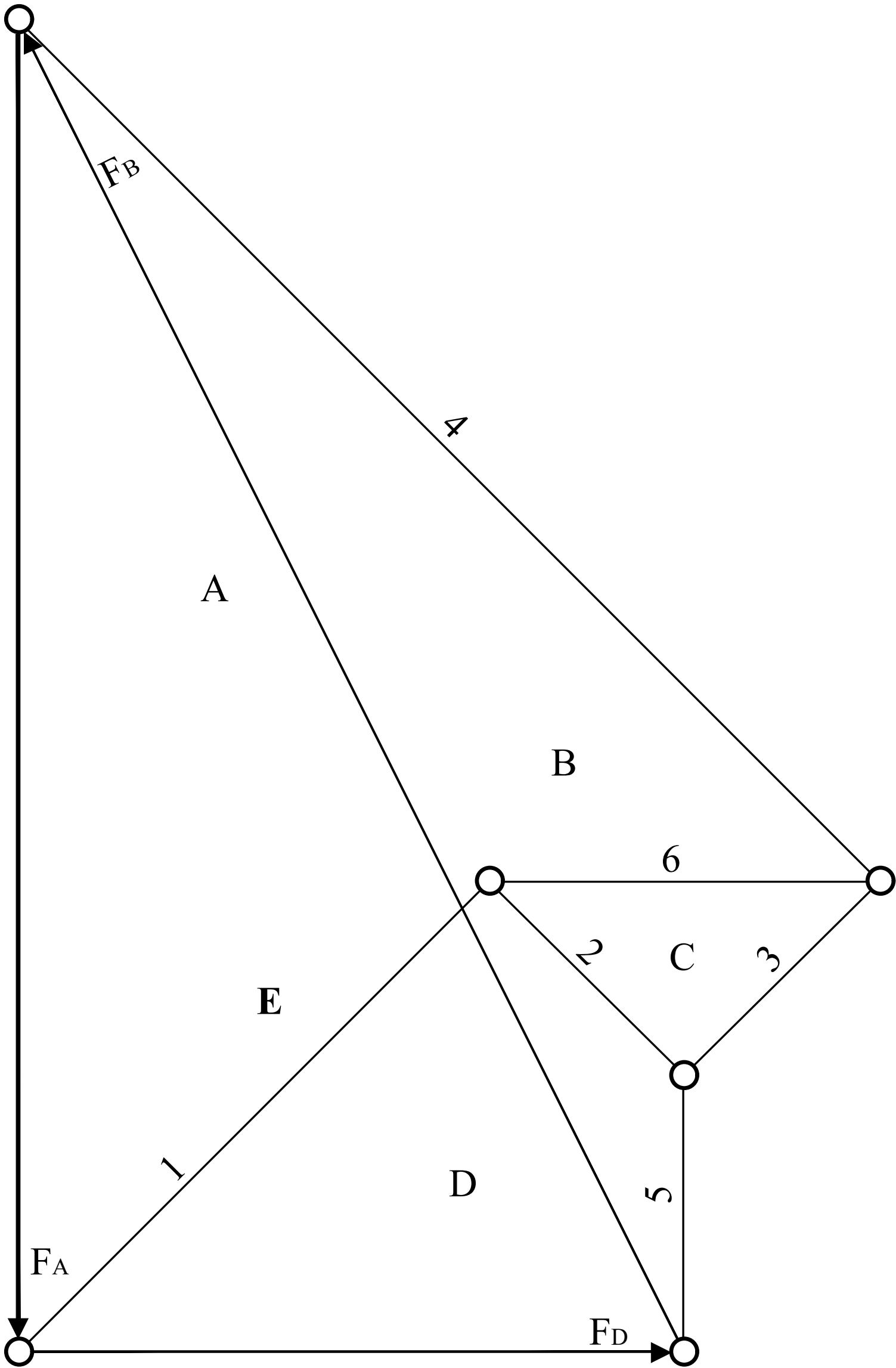


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TREILLIS - CONSTRUCTION DES POLYGÔNES

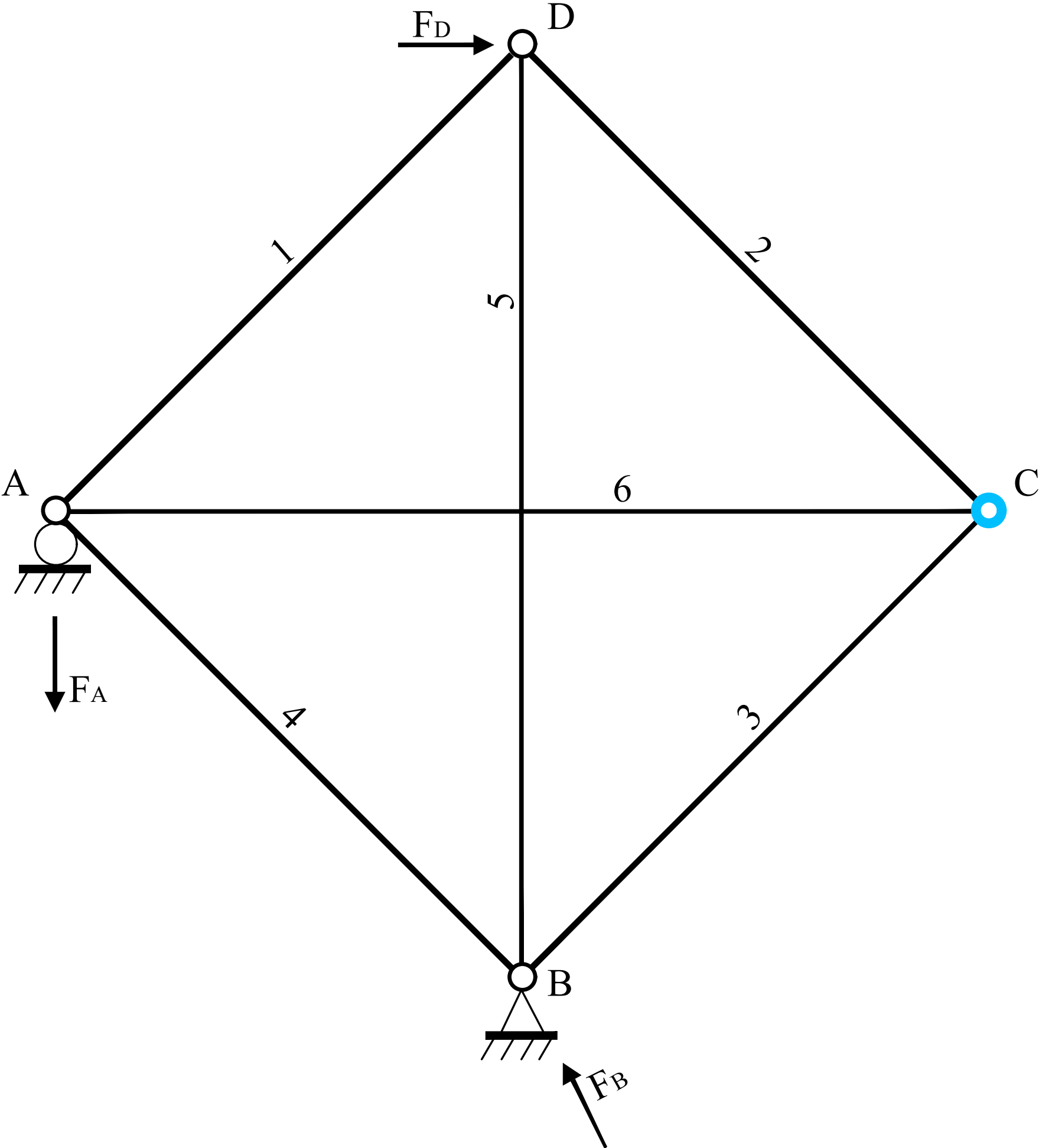


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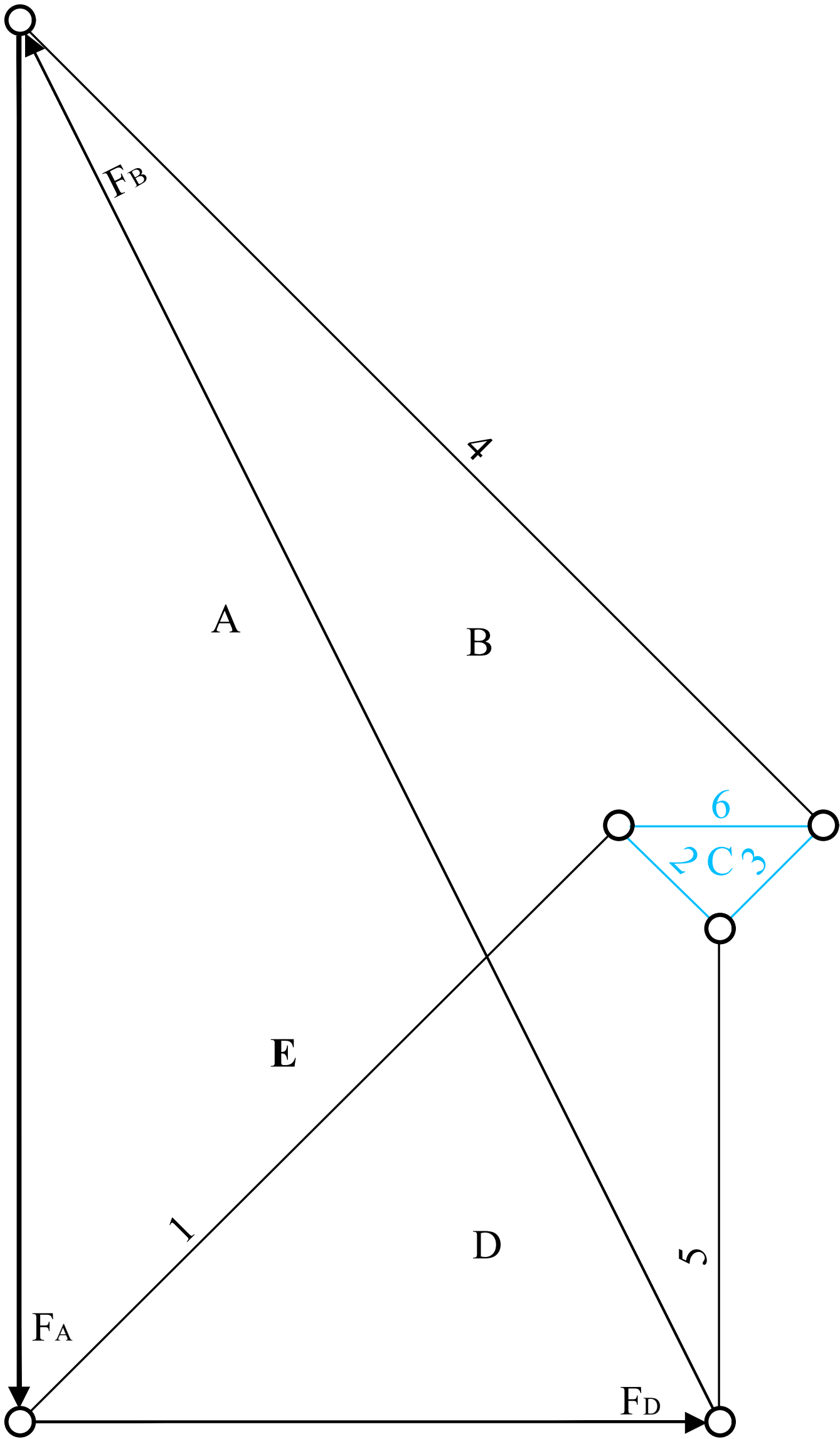


DIAGRAMME DES FORCES

TREILLIS - CONSTRUCTION DES POLYGÔNES

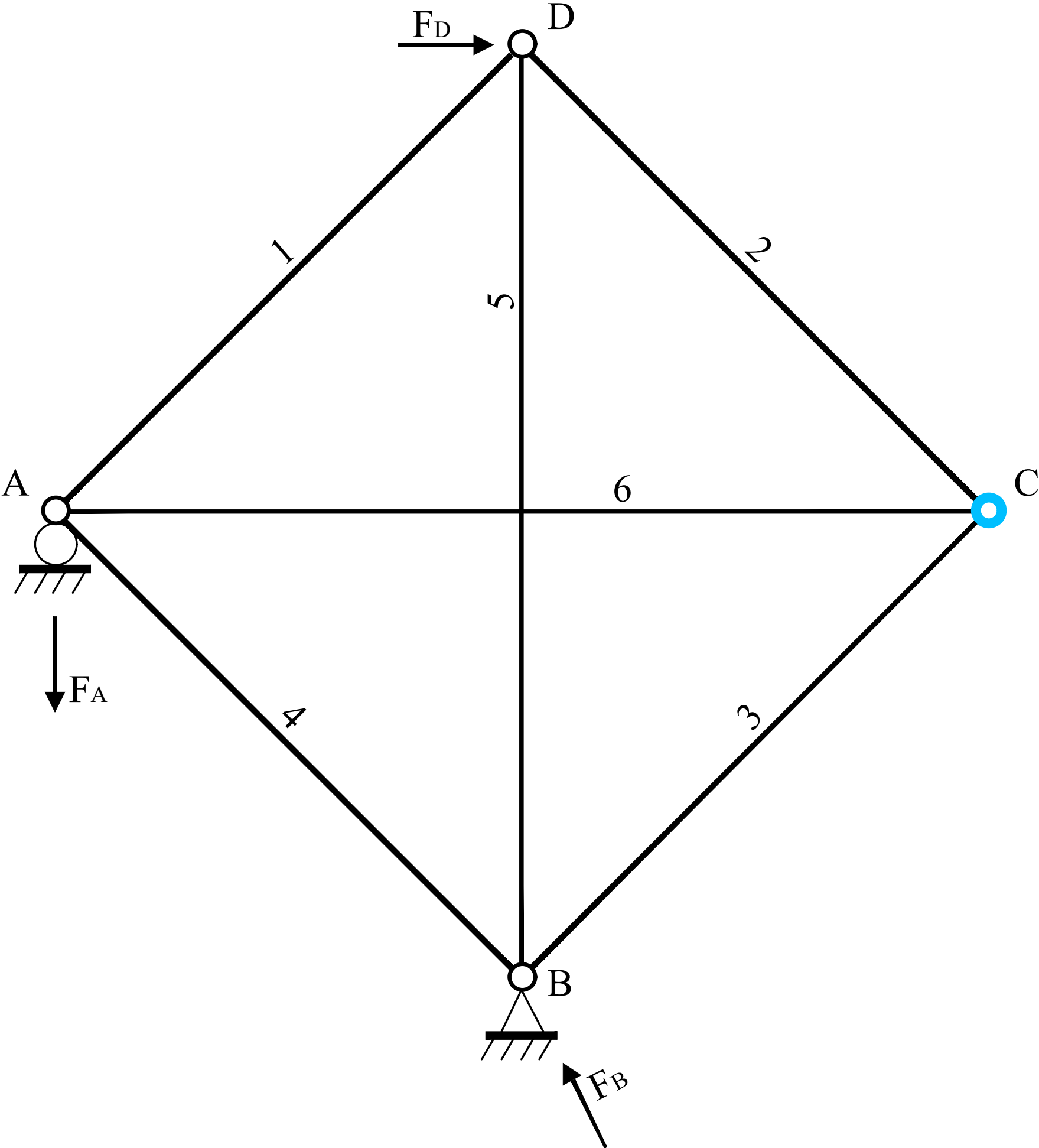


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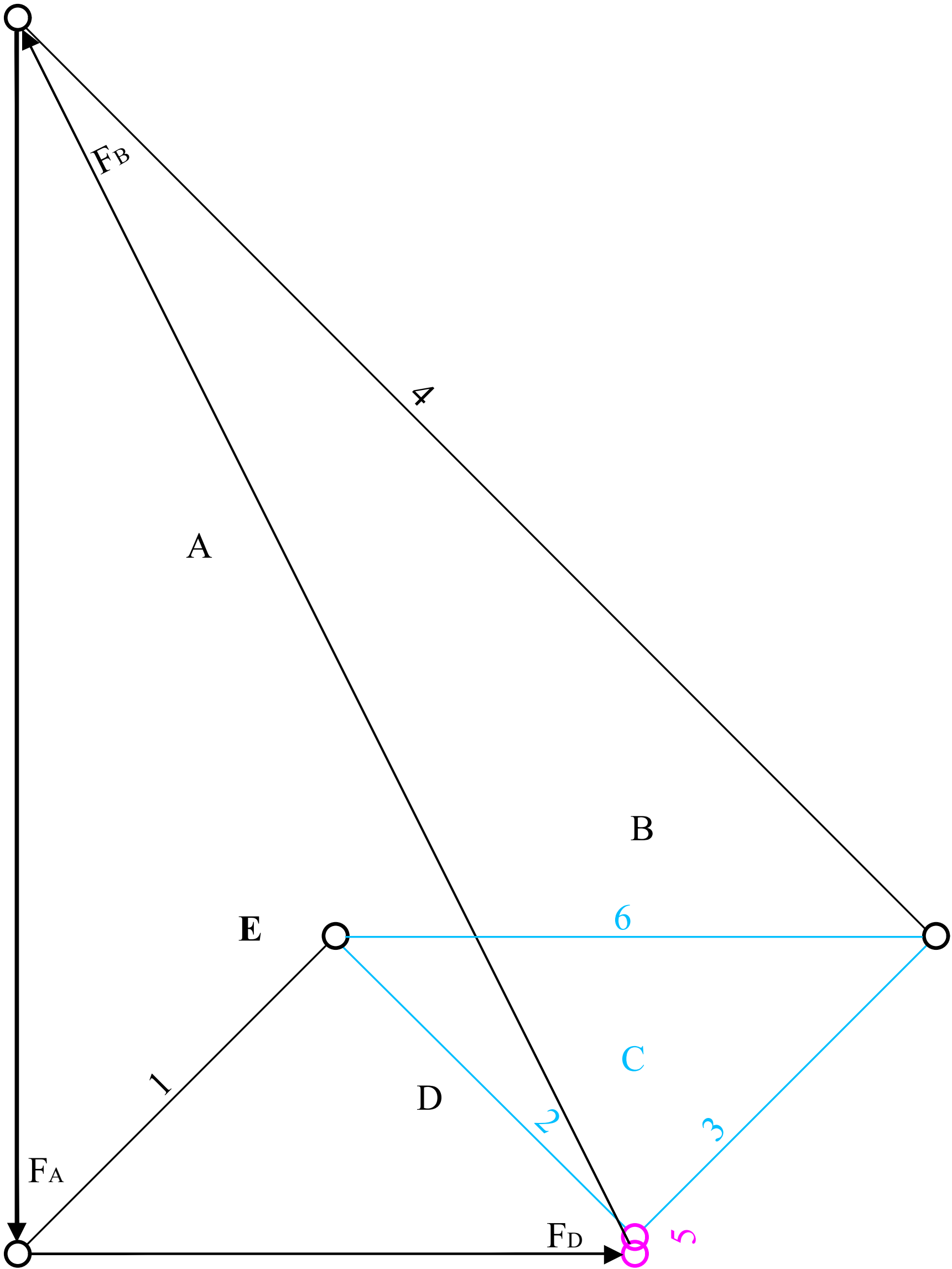


DIAGRAMME DES FORCES

TREILLIS - CONSTRUCTION DES POLYGONES

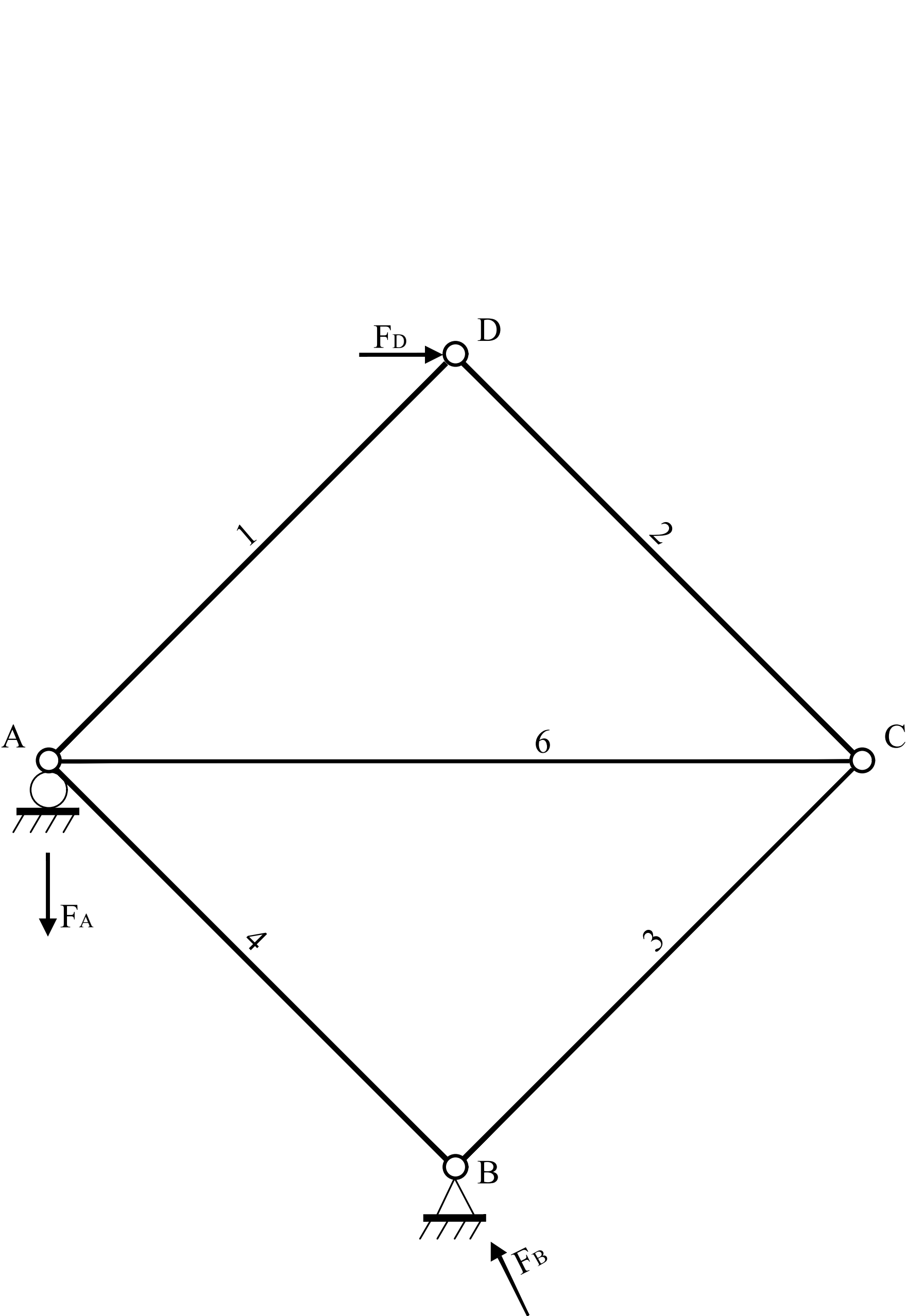


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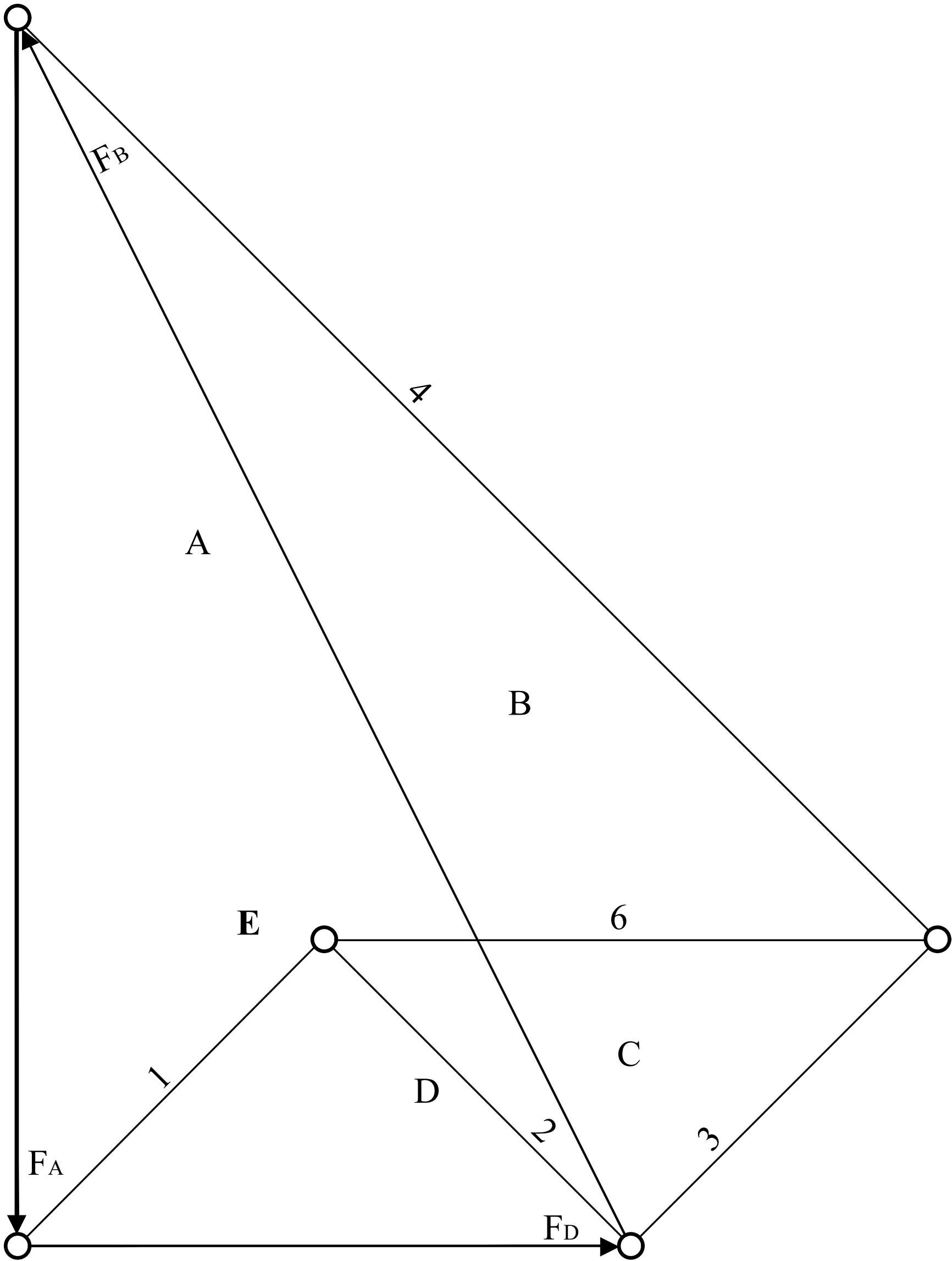


DIAGRAMME DES FORCES

TREILLIS - VOILES SIMPLES

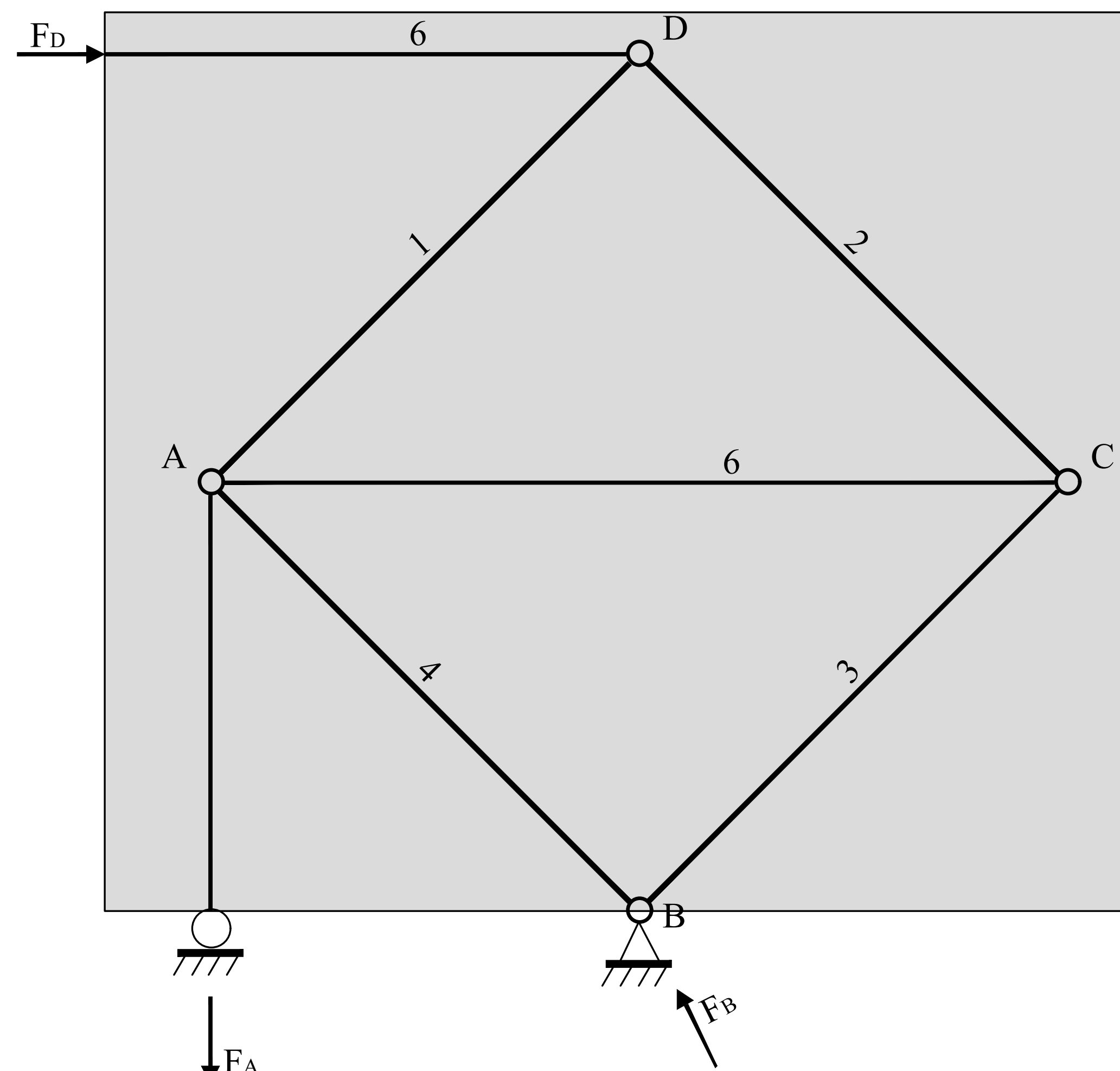


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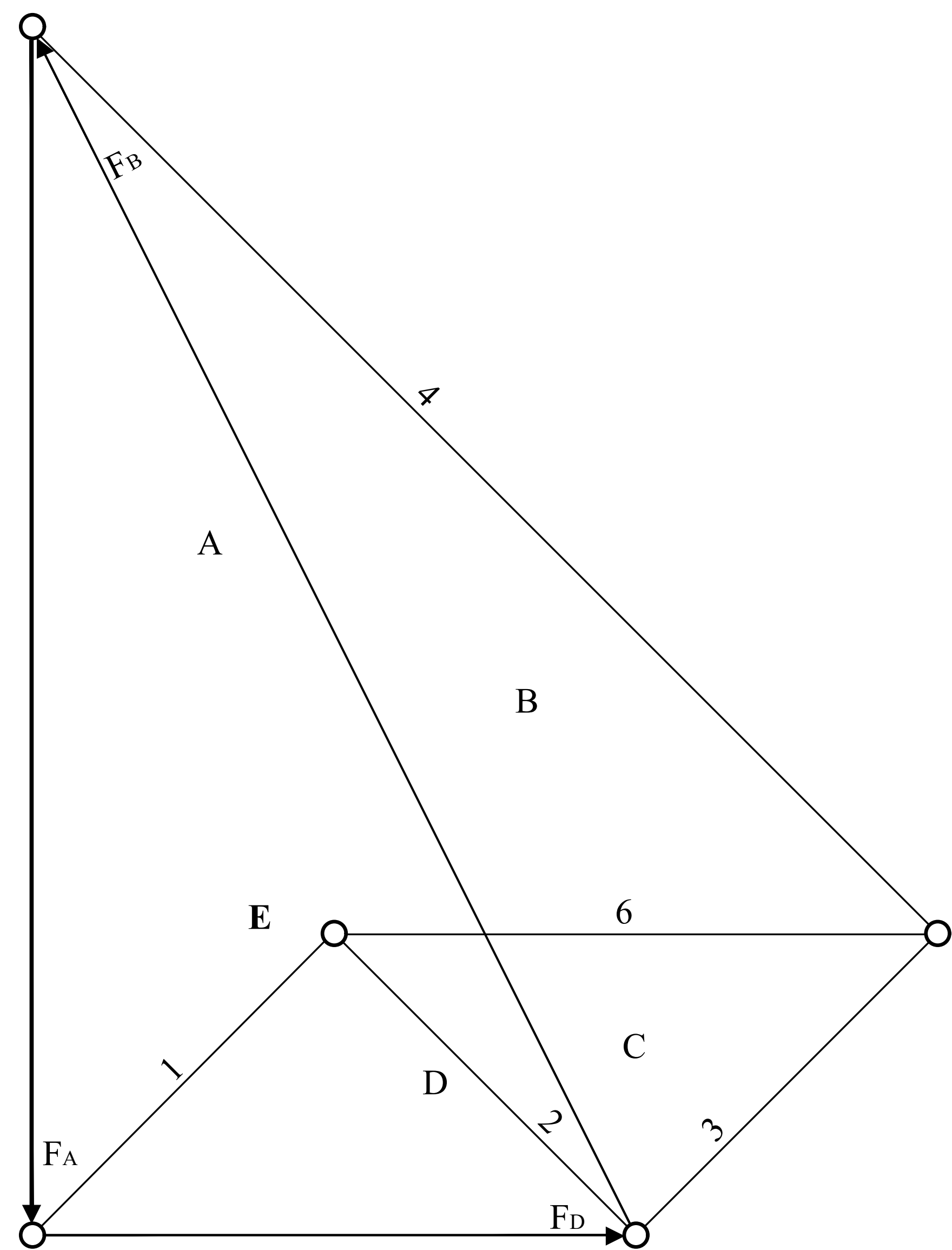


DIAGRAMME DES FORCES

VOILES SIMPLES - CONSTRUCTION DES POLYGONES

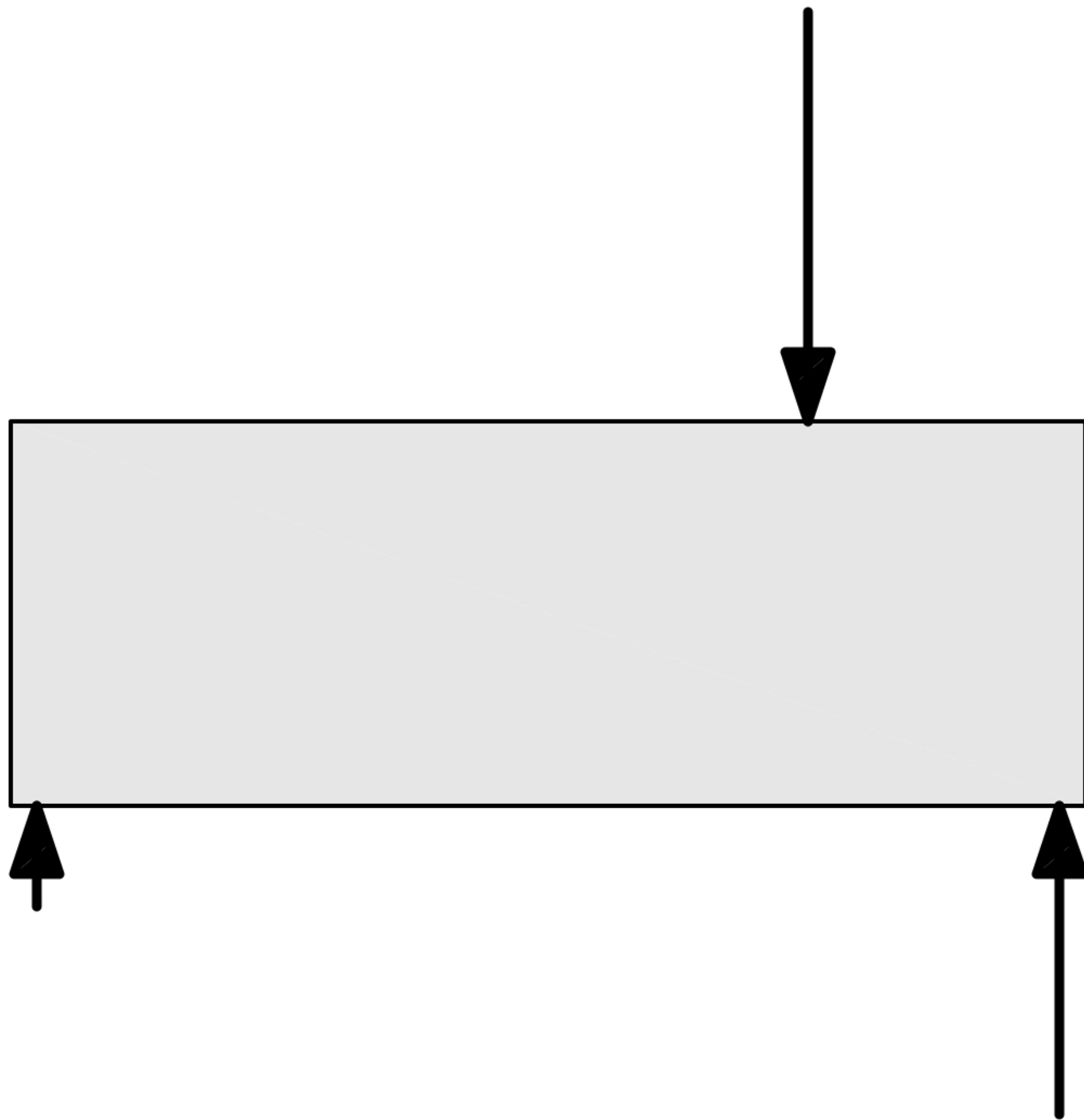


DIAGRAMME DES SITUATIONS

DIAGRAMME DES FORCES

VOILES SIMPLES - CONSTRUCTION DES POLYGONES

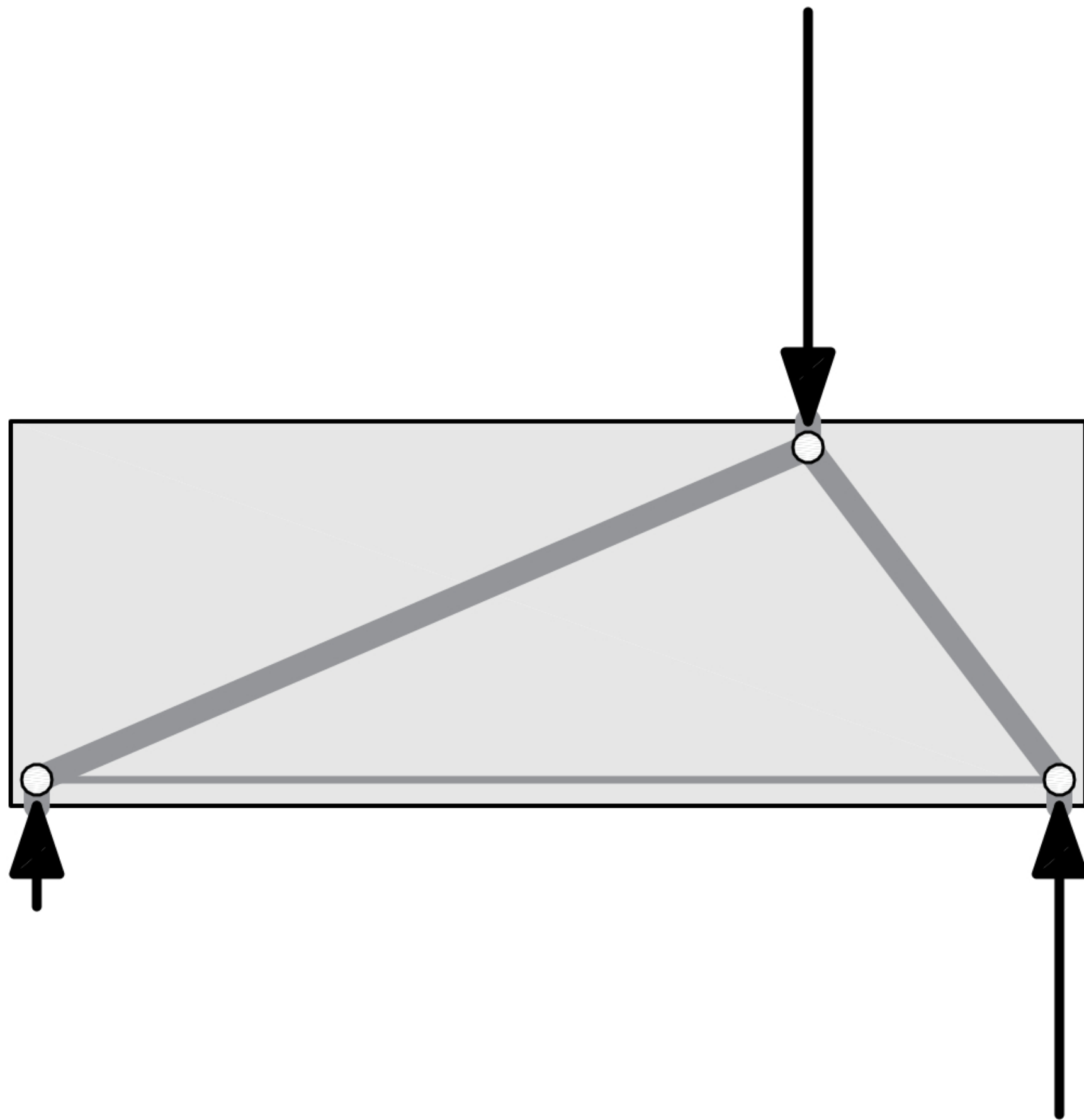


DIAGRAMME DES SITUATIONS



DIAGRAMME DES FORCES

VOILES SIMPLES - CONSTRUCTION DES POLYGONES

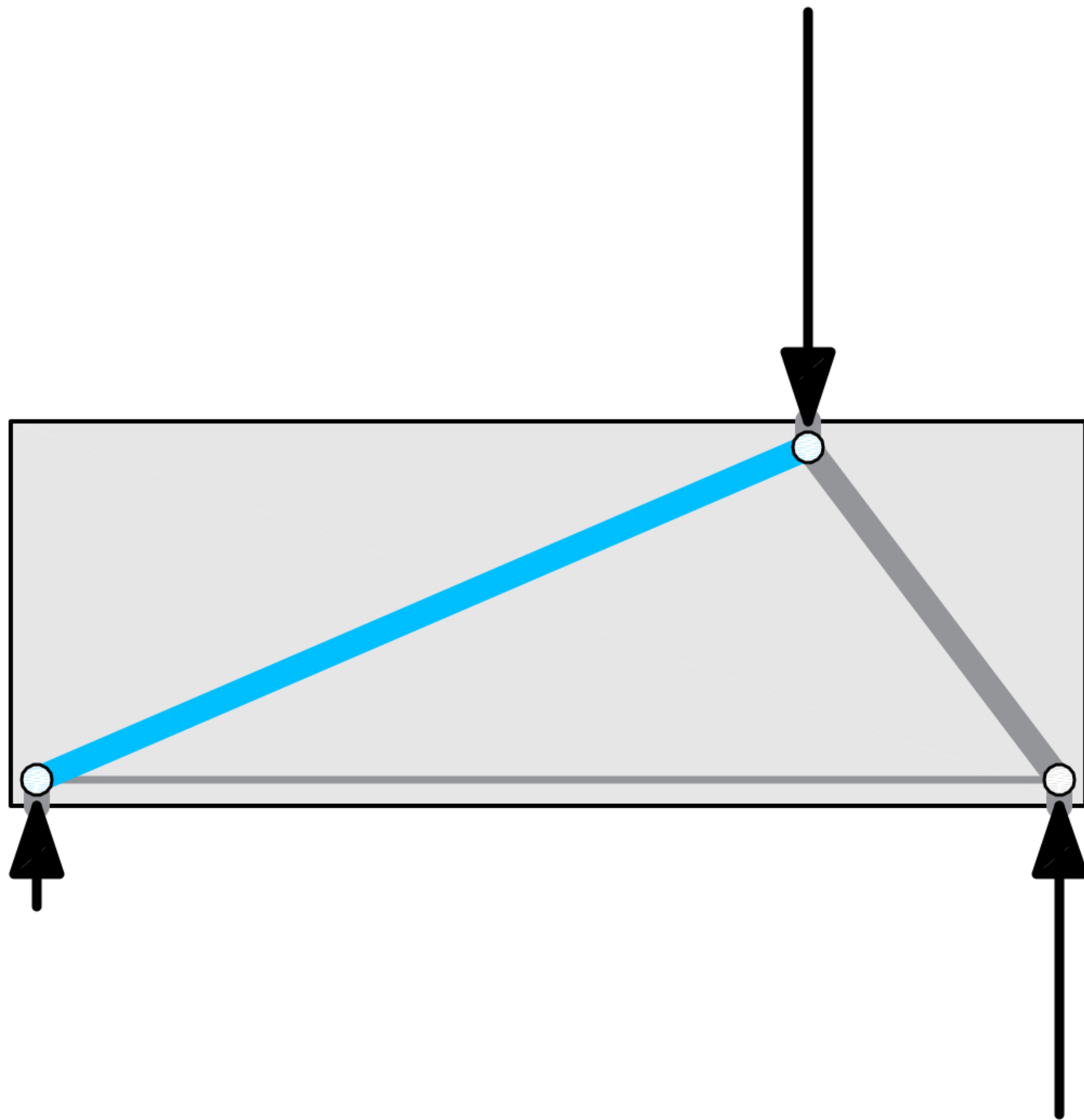


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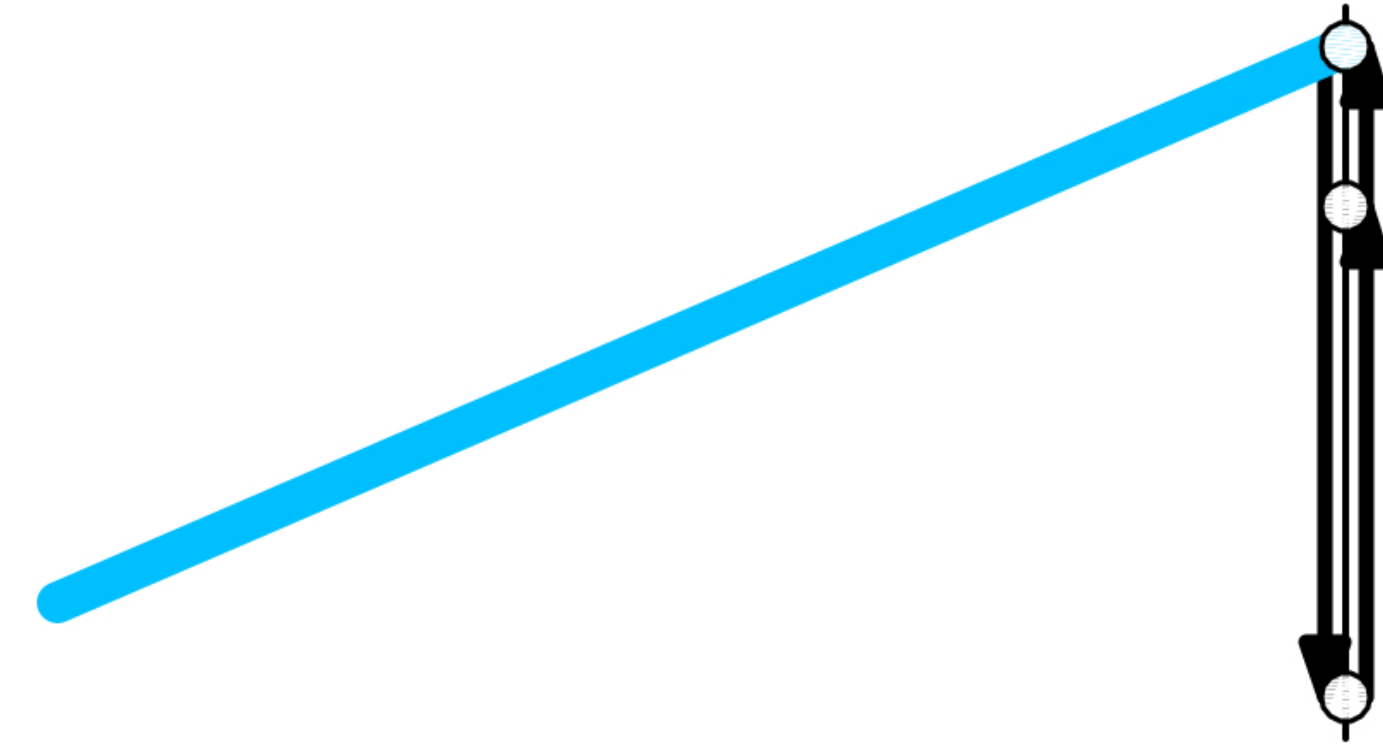


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VOILES SIMPLES - CONSTRUCTION DES POLYGONES

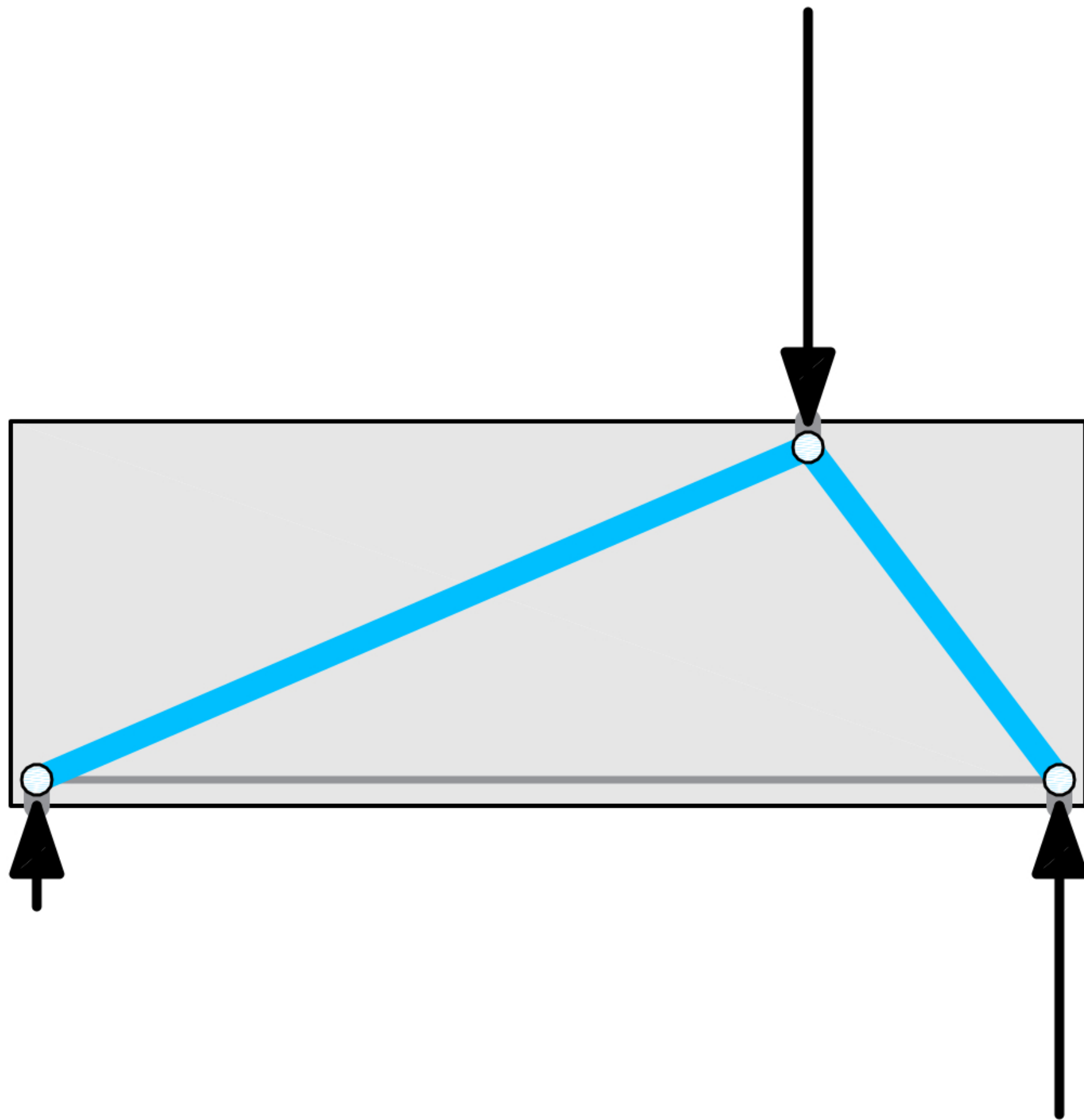


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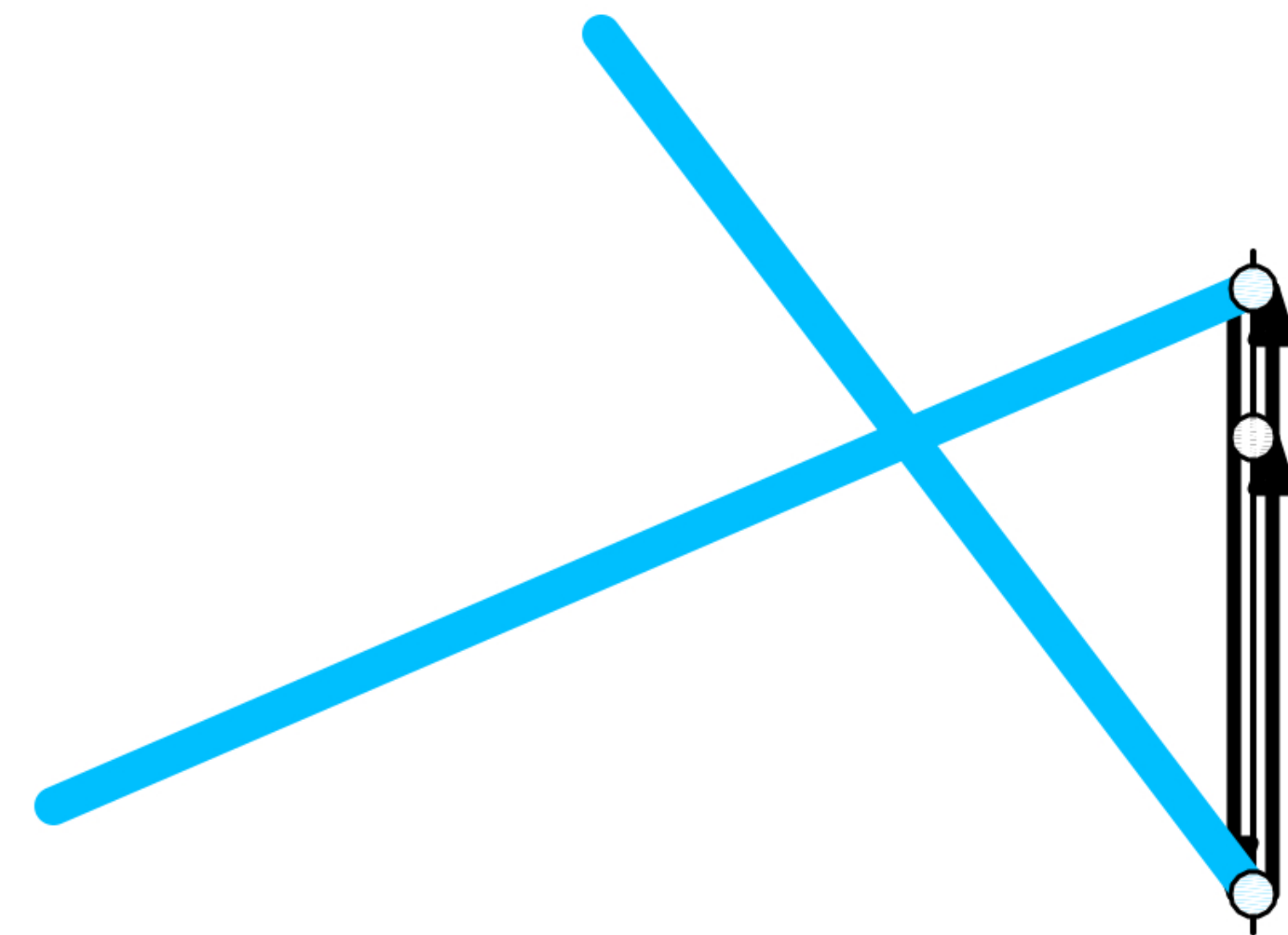


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VOILES SIMPLES - CONSTRUCTION DES POLYGONES

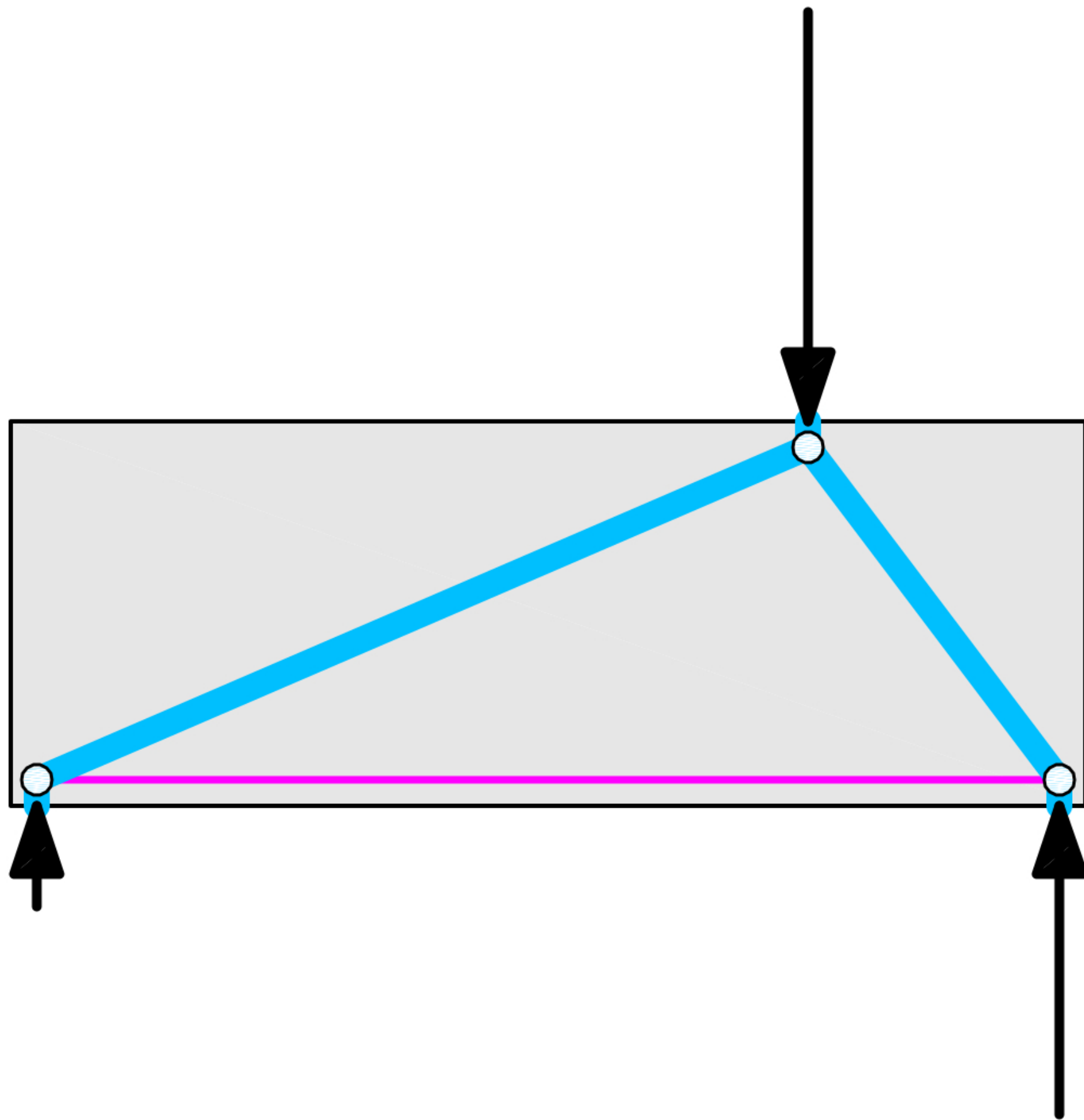


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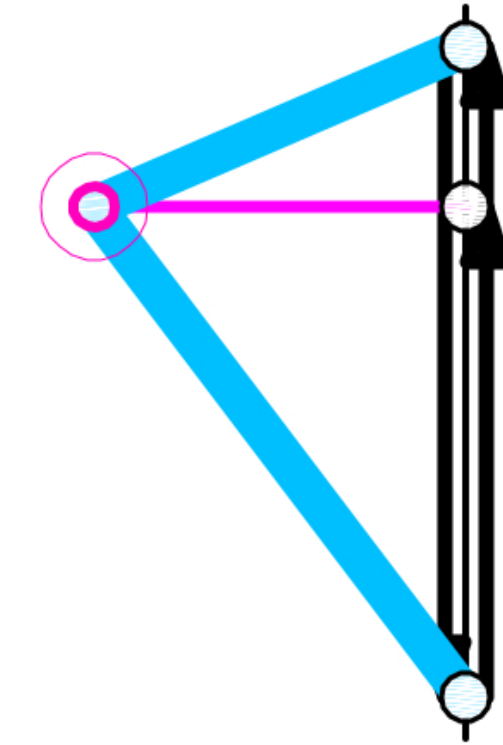


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VOILES SIMPLES - CONSTRUCTION DES POLYGONES

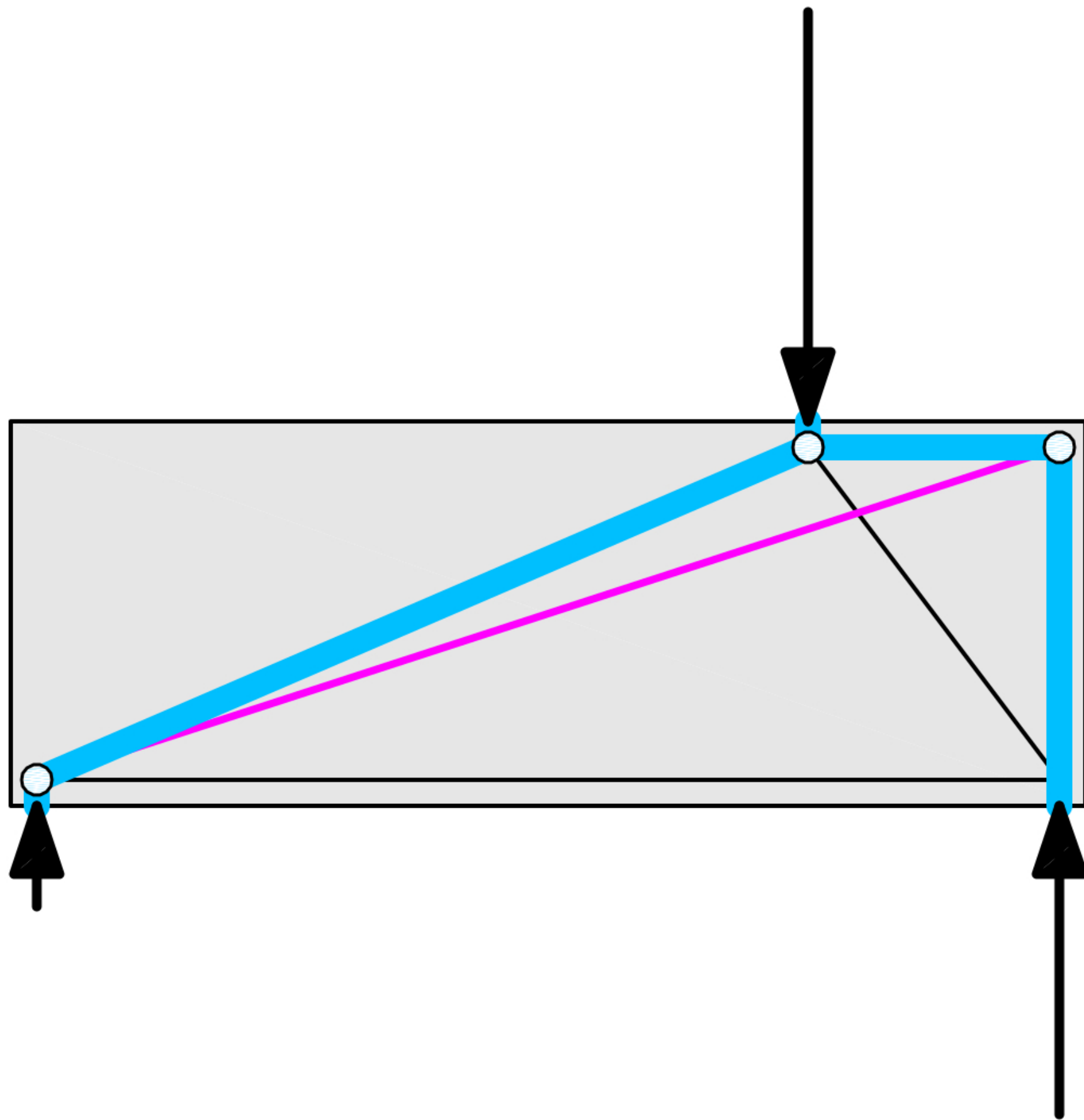


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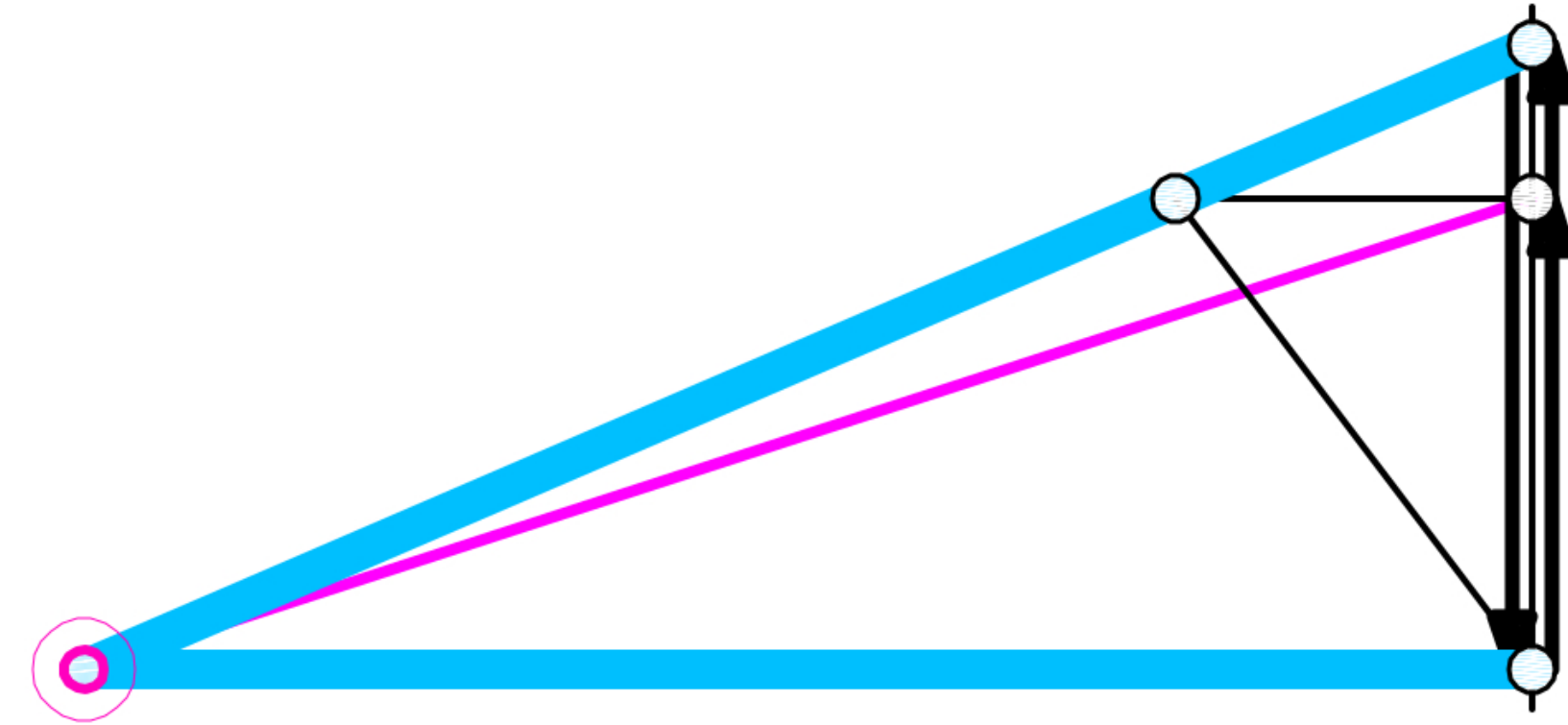


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VOILES SIMPLES - CONSTRUCTION DES POLYGONES

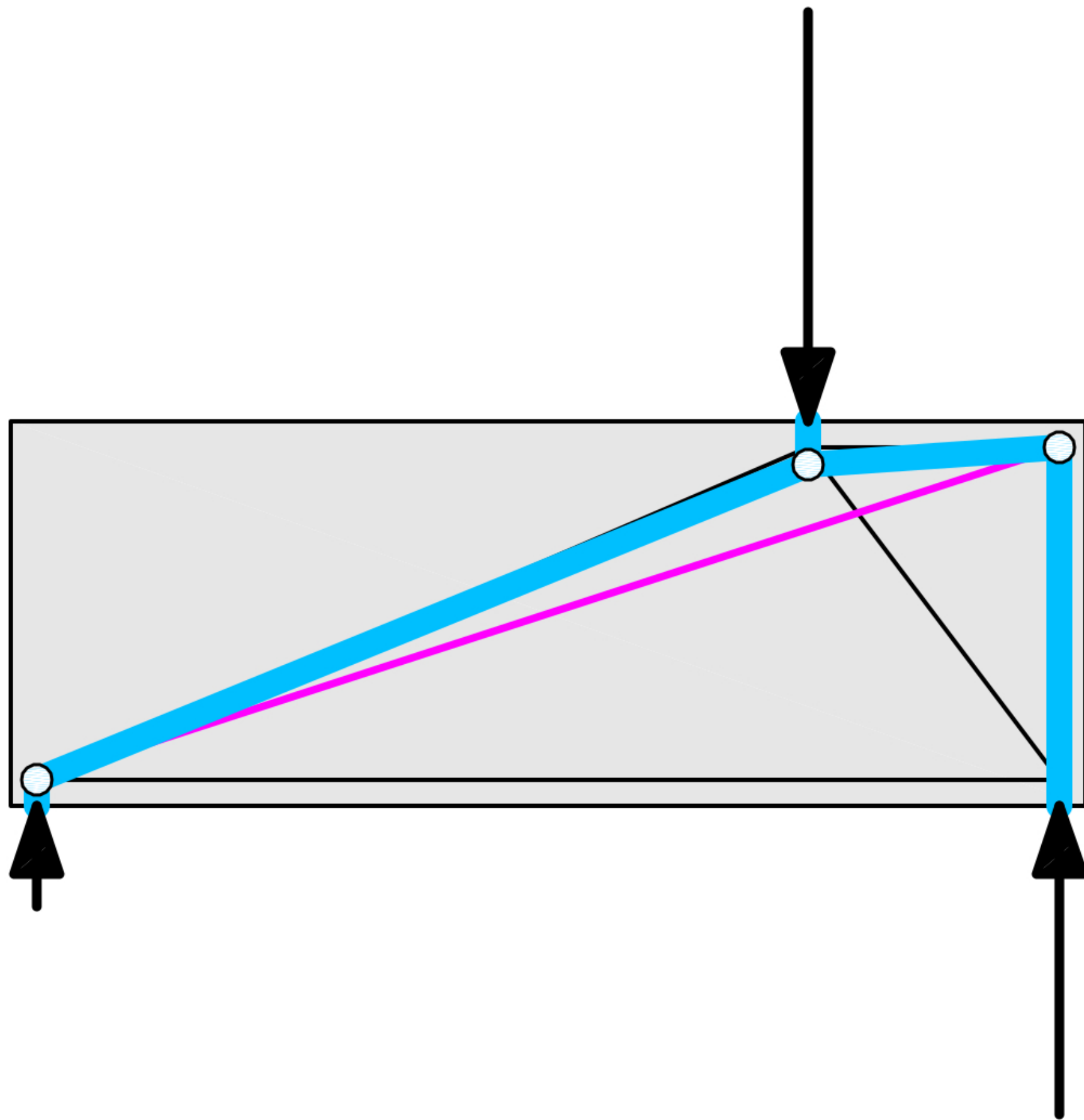


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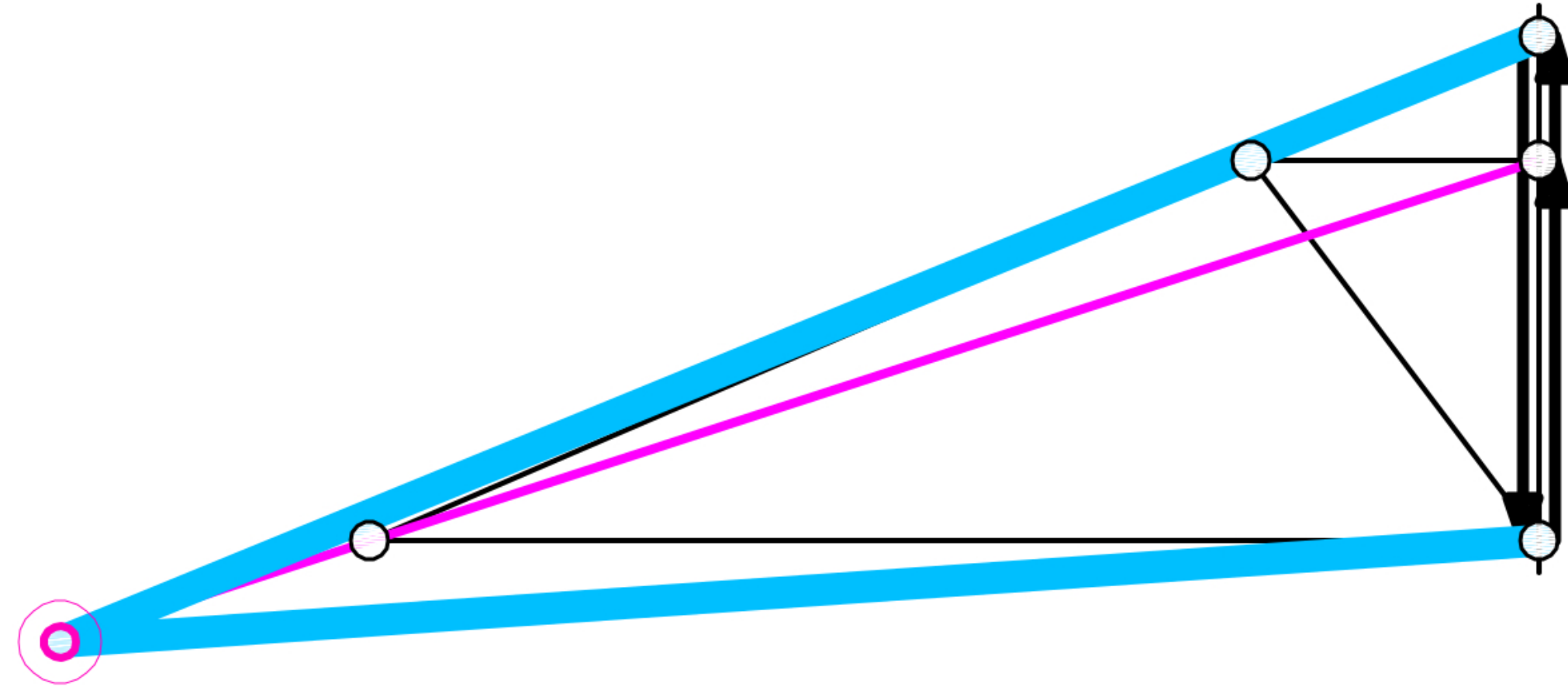


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VOILES SIMPLES - CONSTRUCTION DES POLYGONES

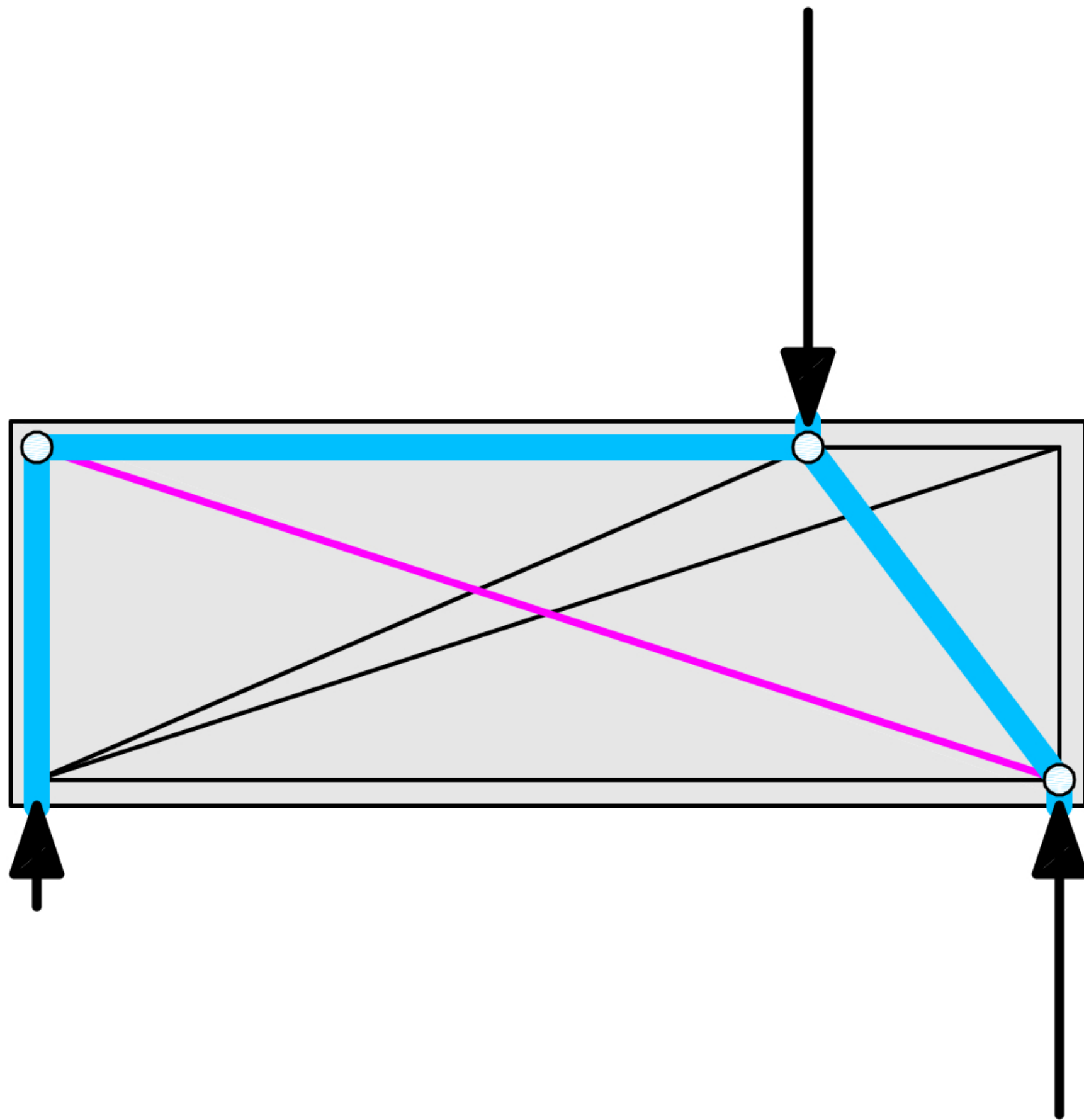


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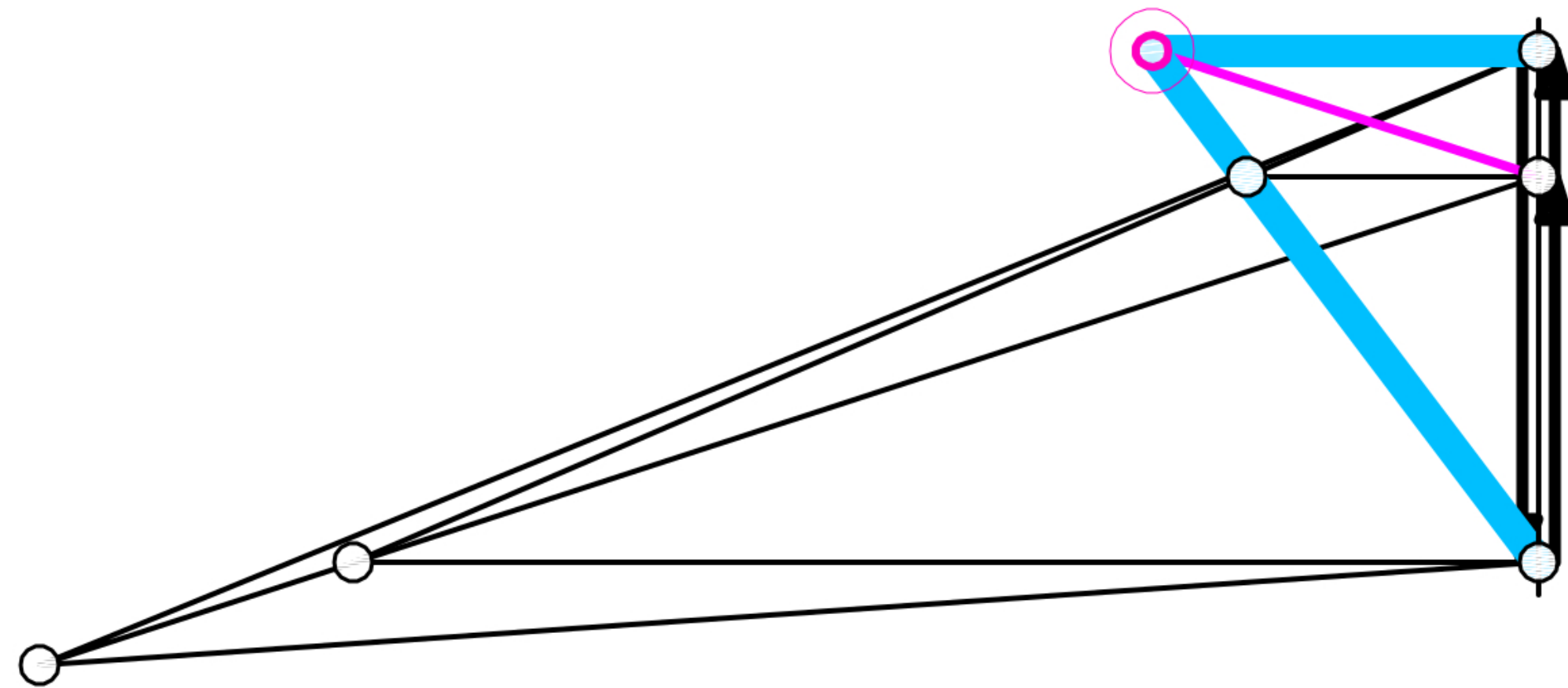


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VOILES SIMPLES - CONSTRUCTION DES POLYGONES

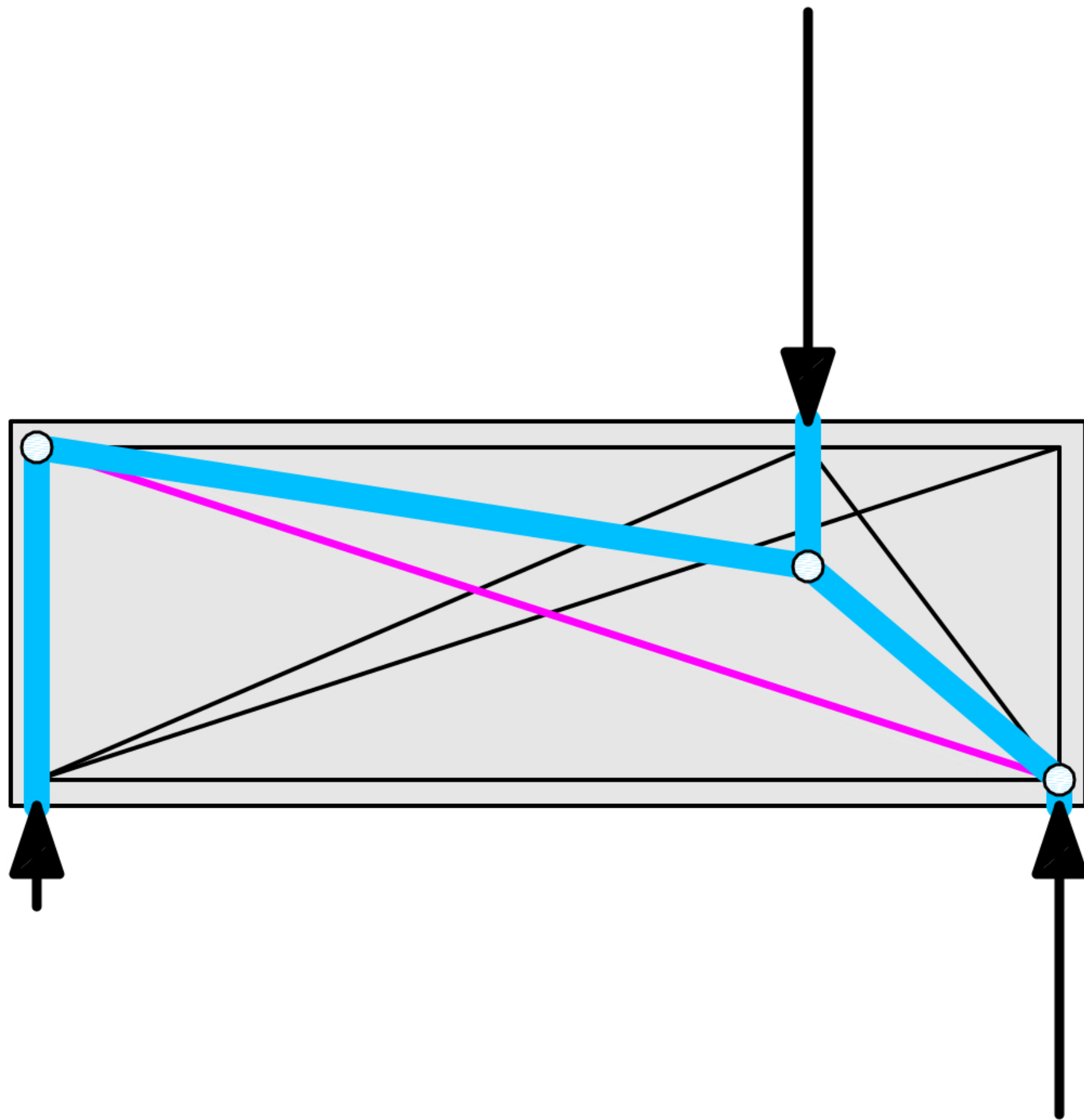


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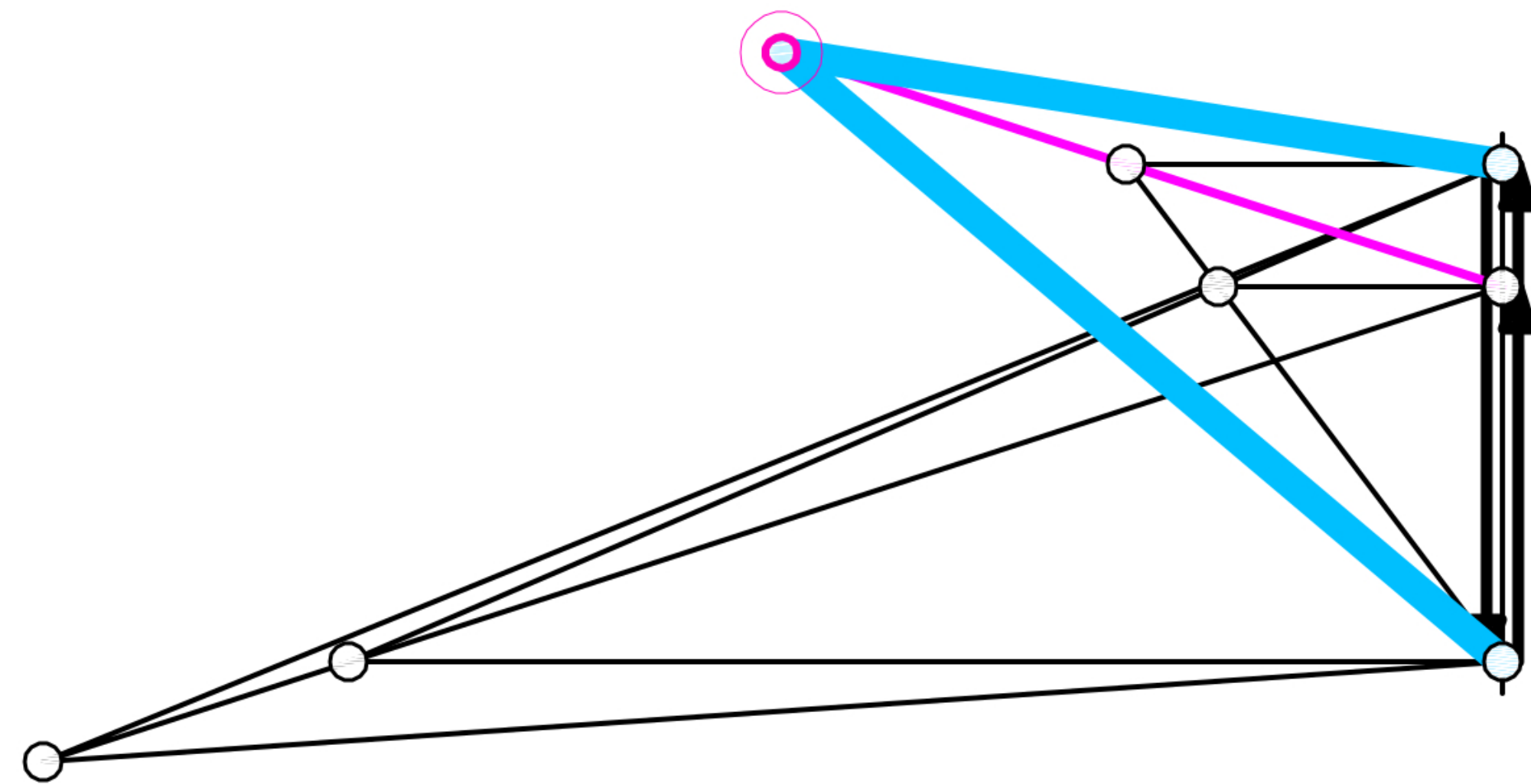


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VOILES SIMPLES - CONSTRUCTION DES POLYGONES

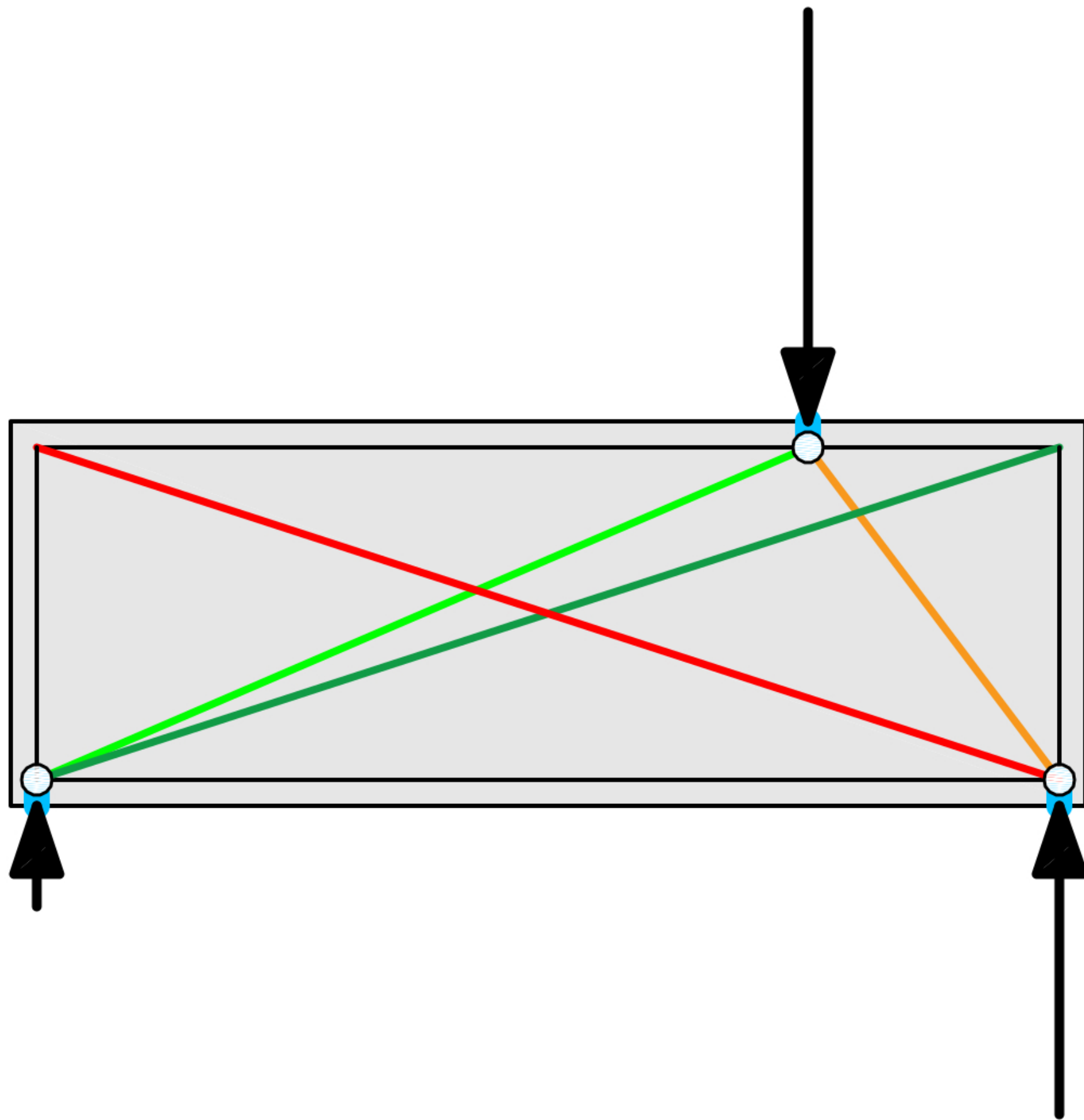


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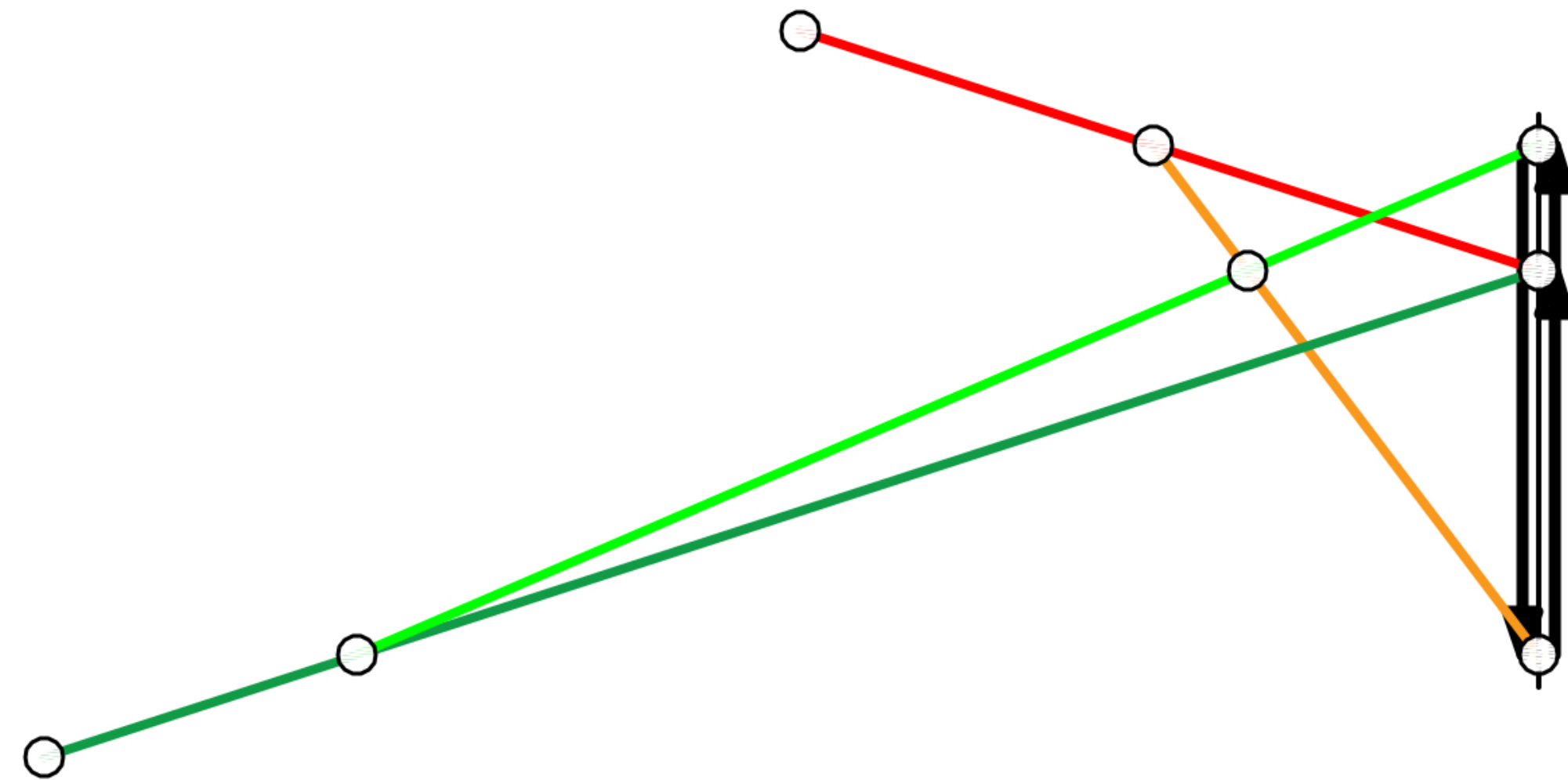


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VOILES SIMPLES - CONSTRUCTION DES POLYGONES

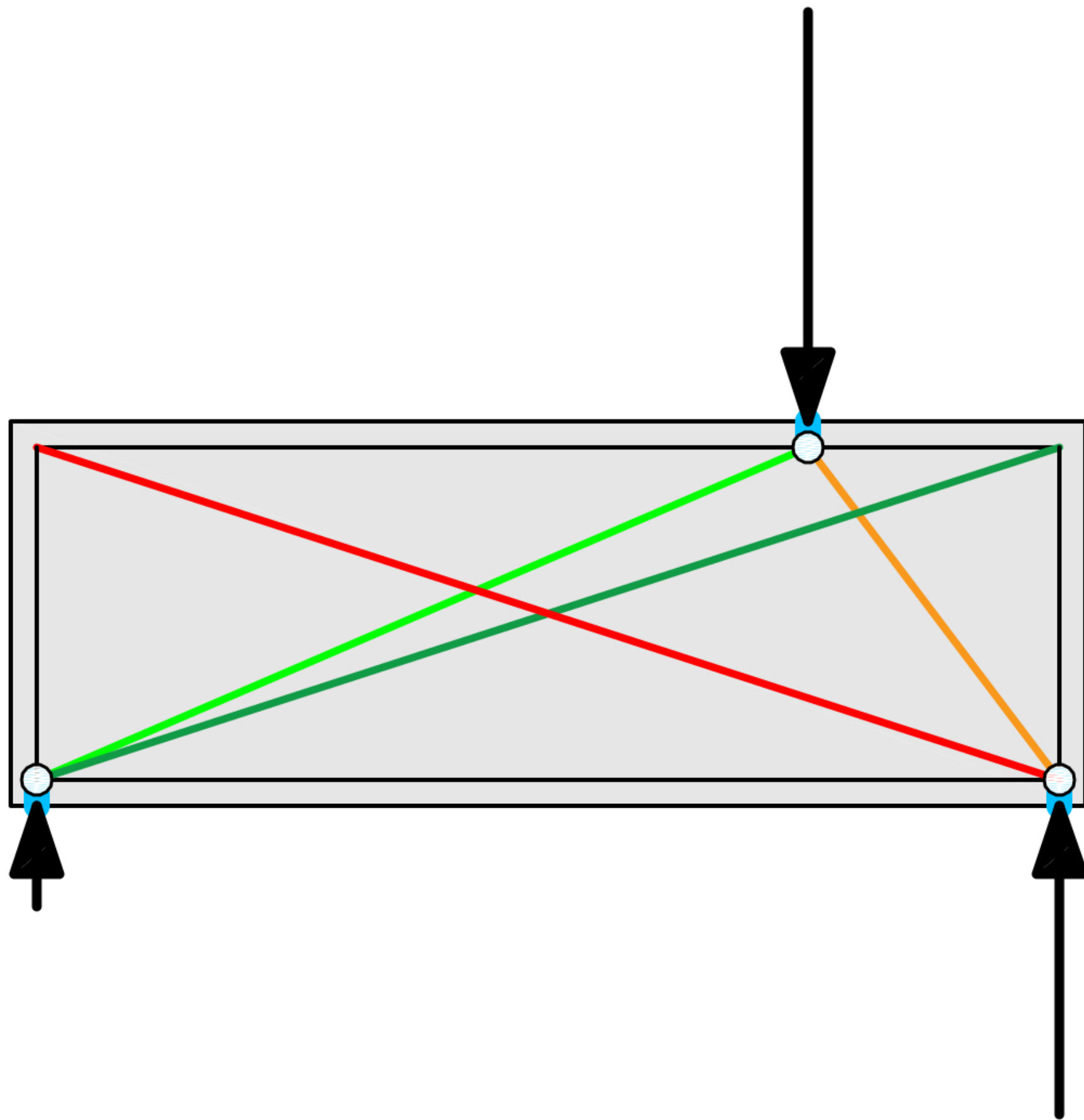


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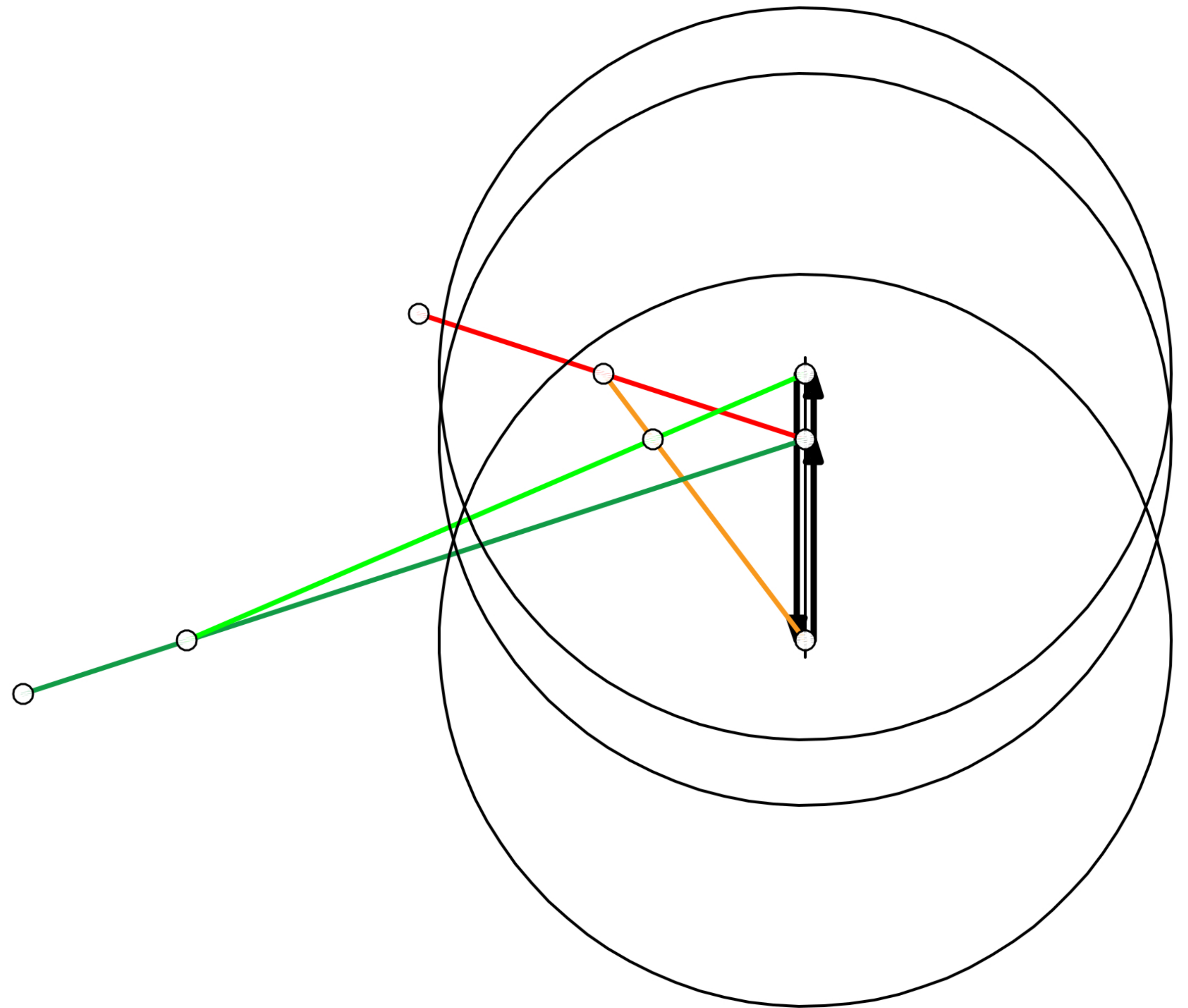


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VOILES SIMPLES - CONSTRUCTION DES POLYGONES

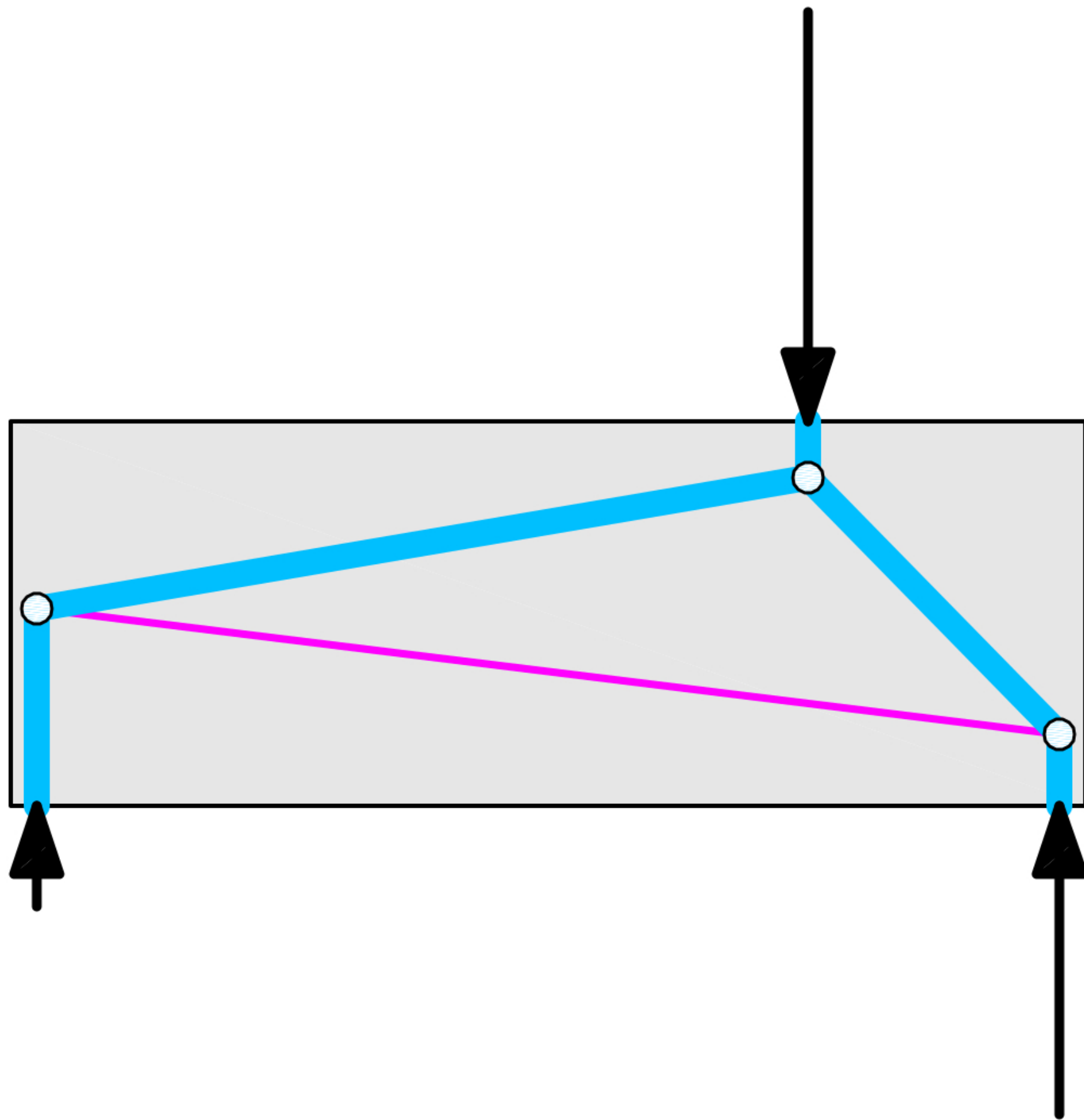


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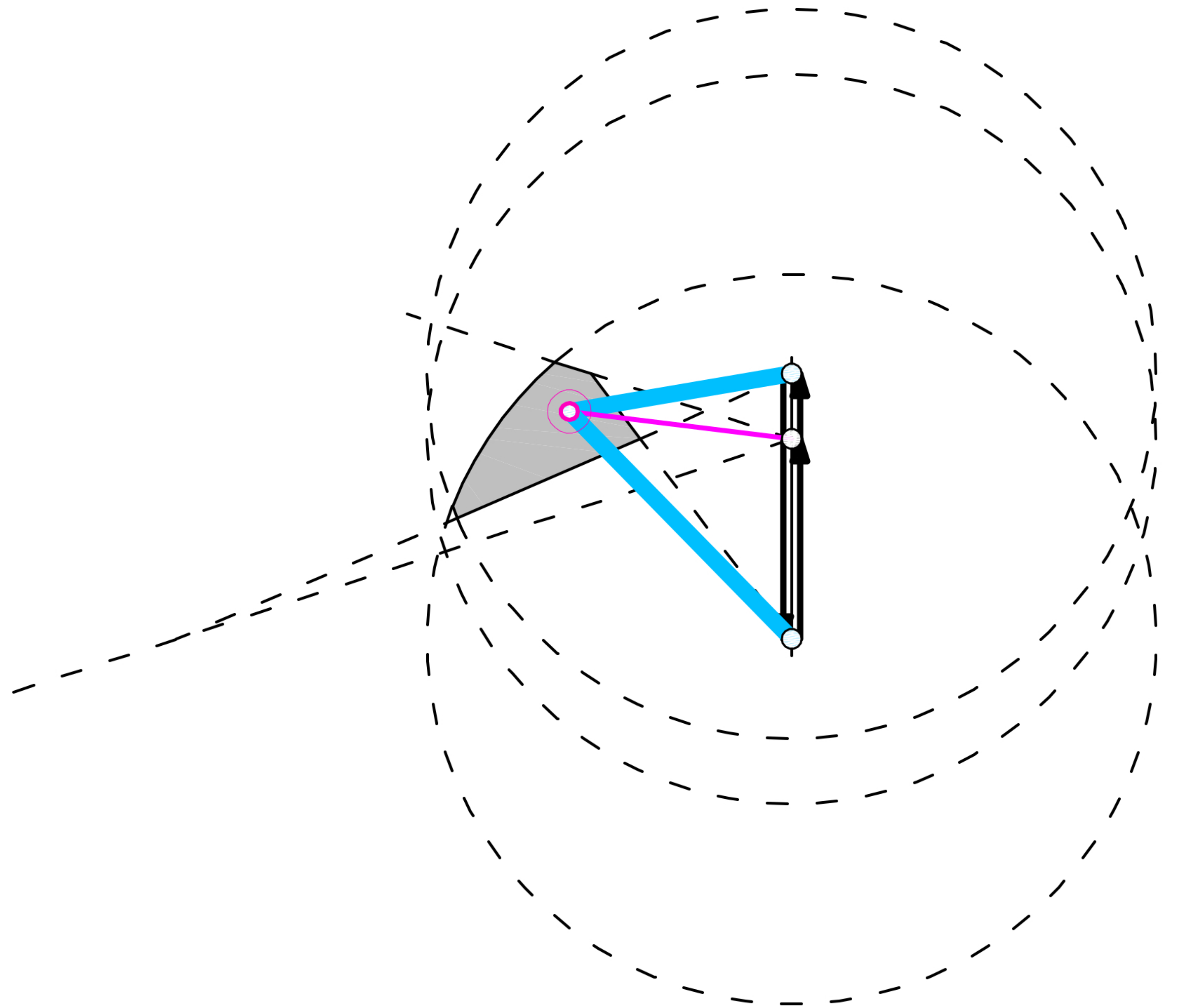


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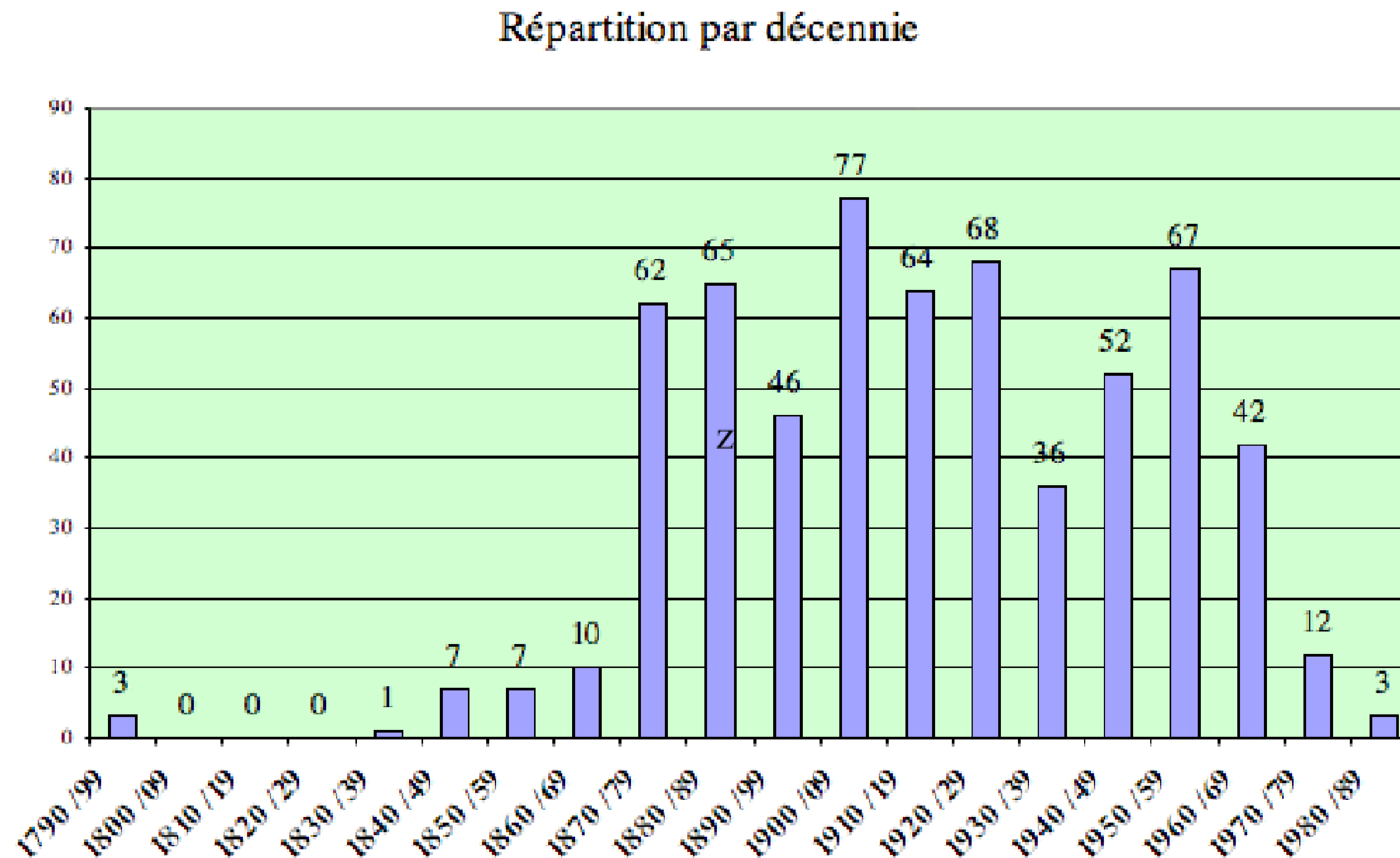


Fig. 4.9 : études statistiques portant sur la publication de 622 ouvrages traitant des méthodes graphiques in Dominique **Tournès** [2003], répartition par décennie

MÉTHODES NUMÉRIQUES => MODÉLISATION PARAMÉTRIQUE => STATIQUE GRAPHIQUE INTERACTIVE

PRÉAMBULE THÉORIQUE À L'ANALYSE STRUCTURALE

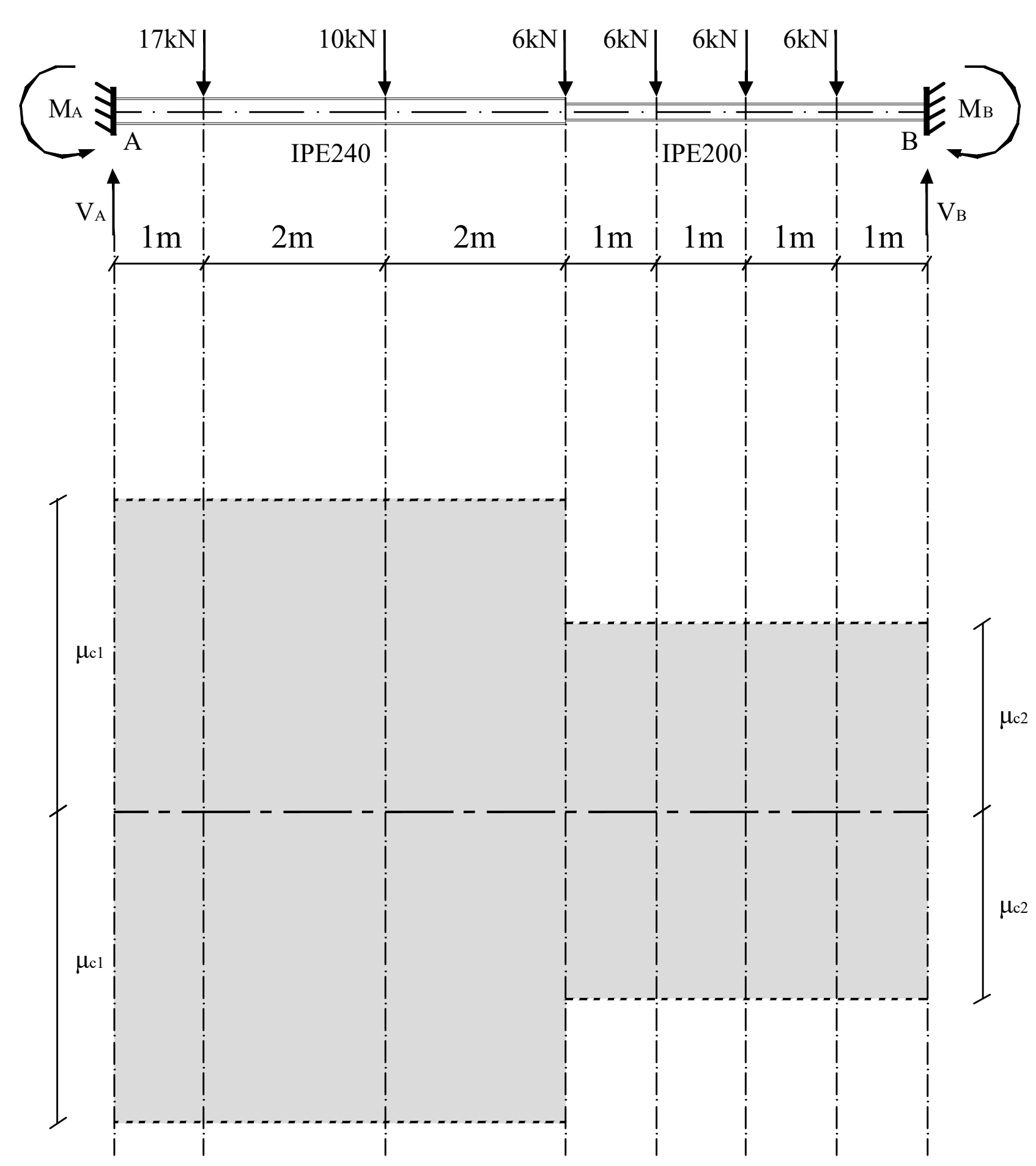


Diagramme de situation [n]

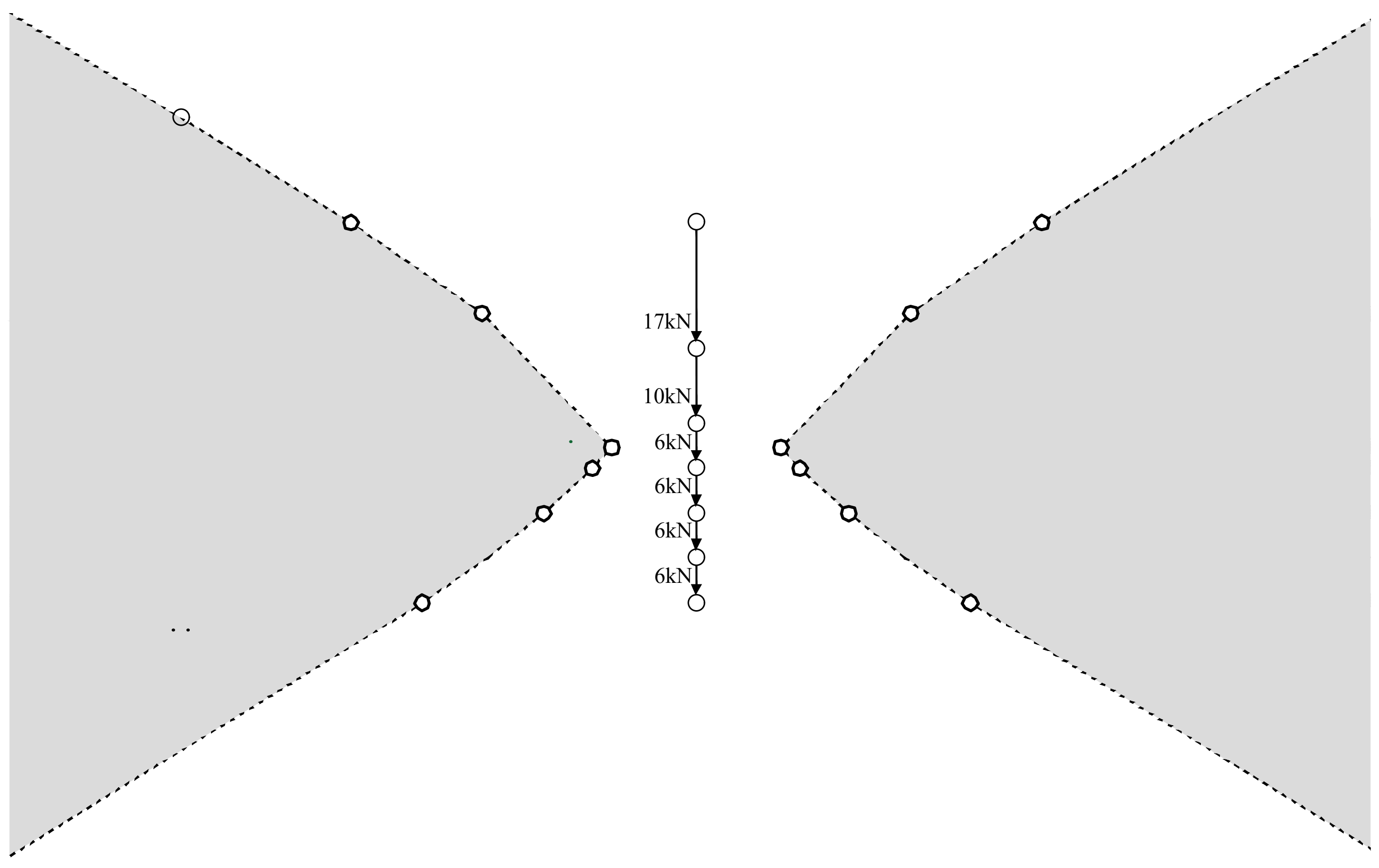


Diagramme des forces [k]

PRÉAMBULE THÉORIQUE À L'ANALYSE STRUCTURALE

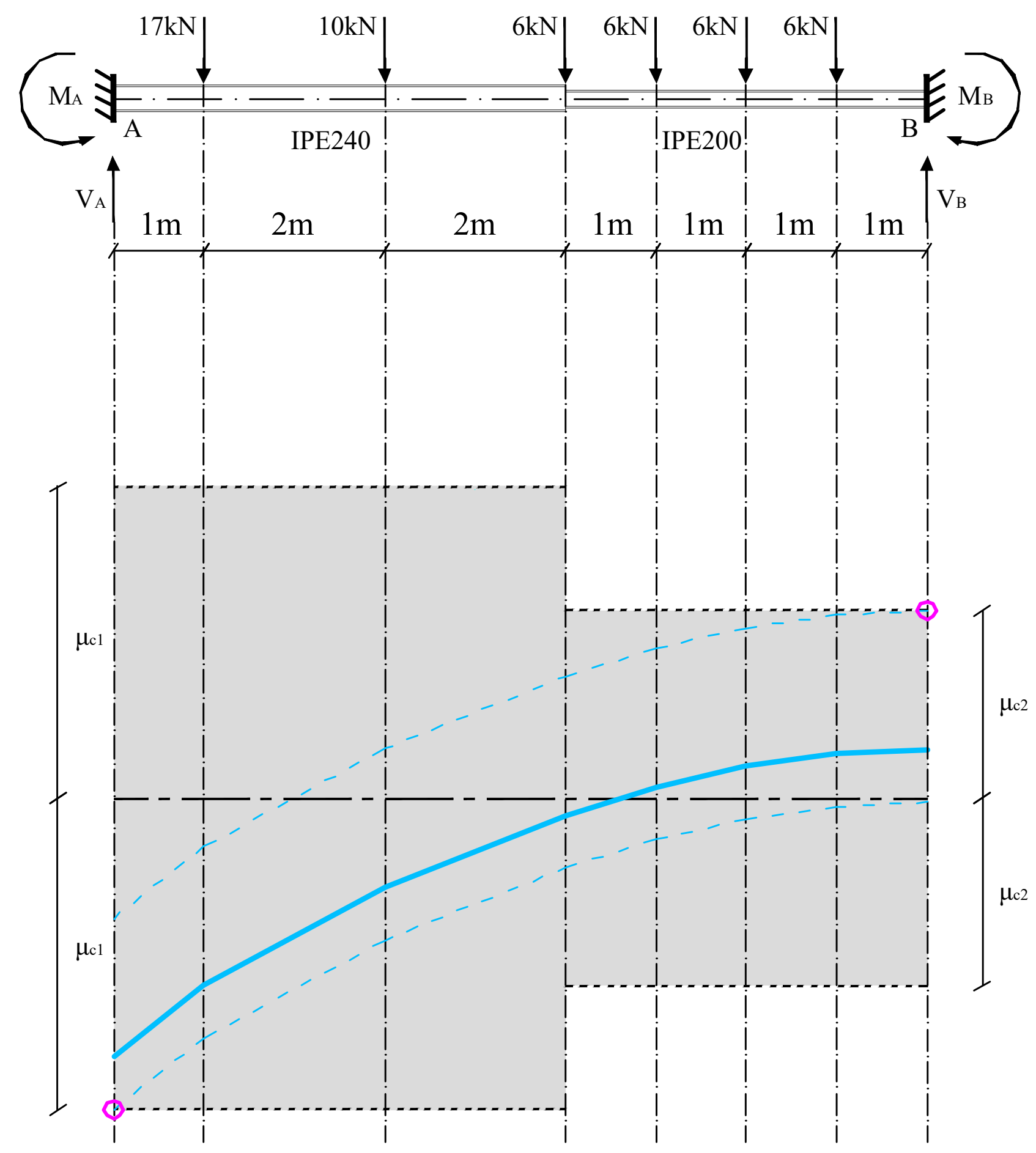


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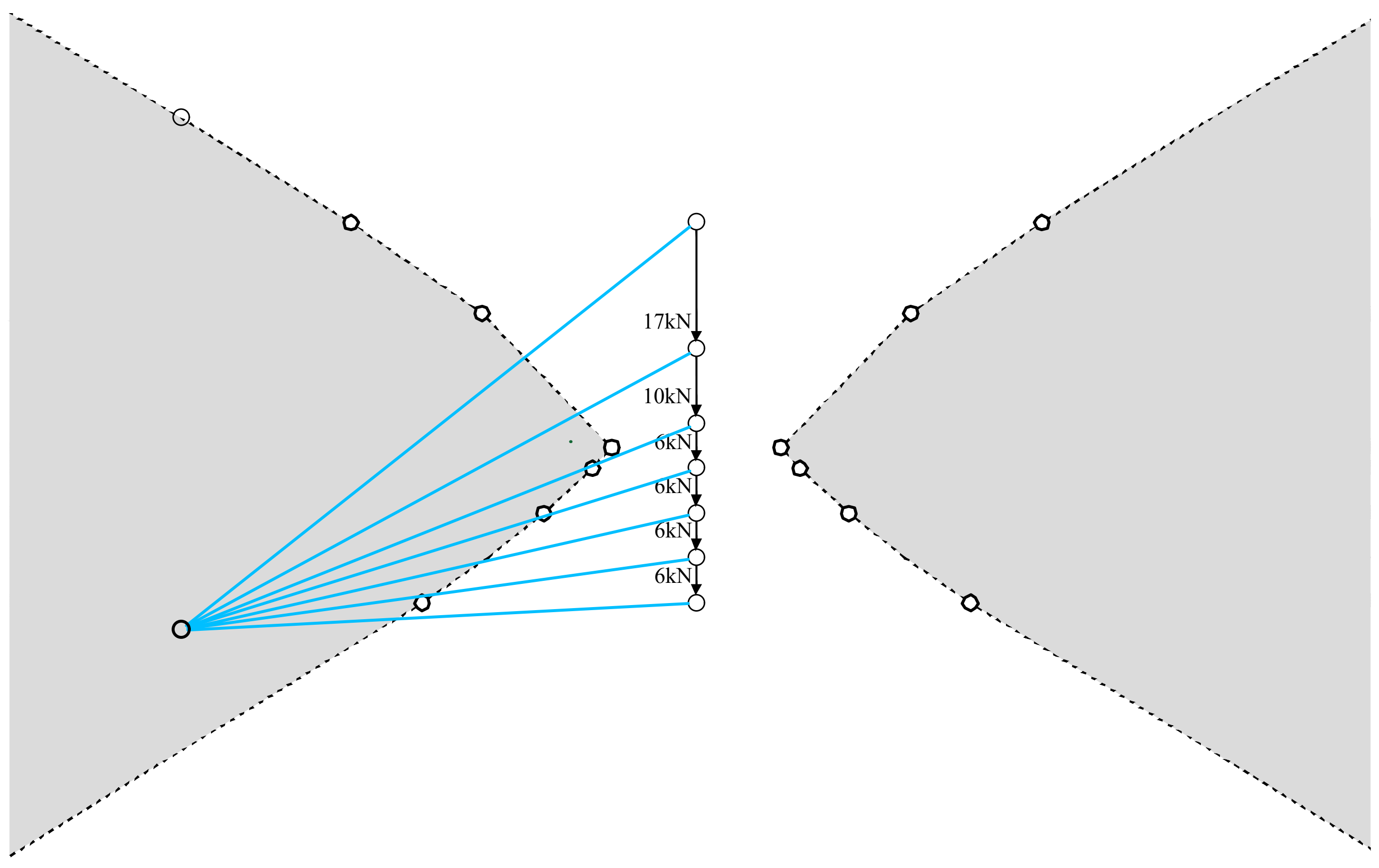


Diagramme des forces [k]

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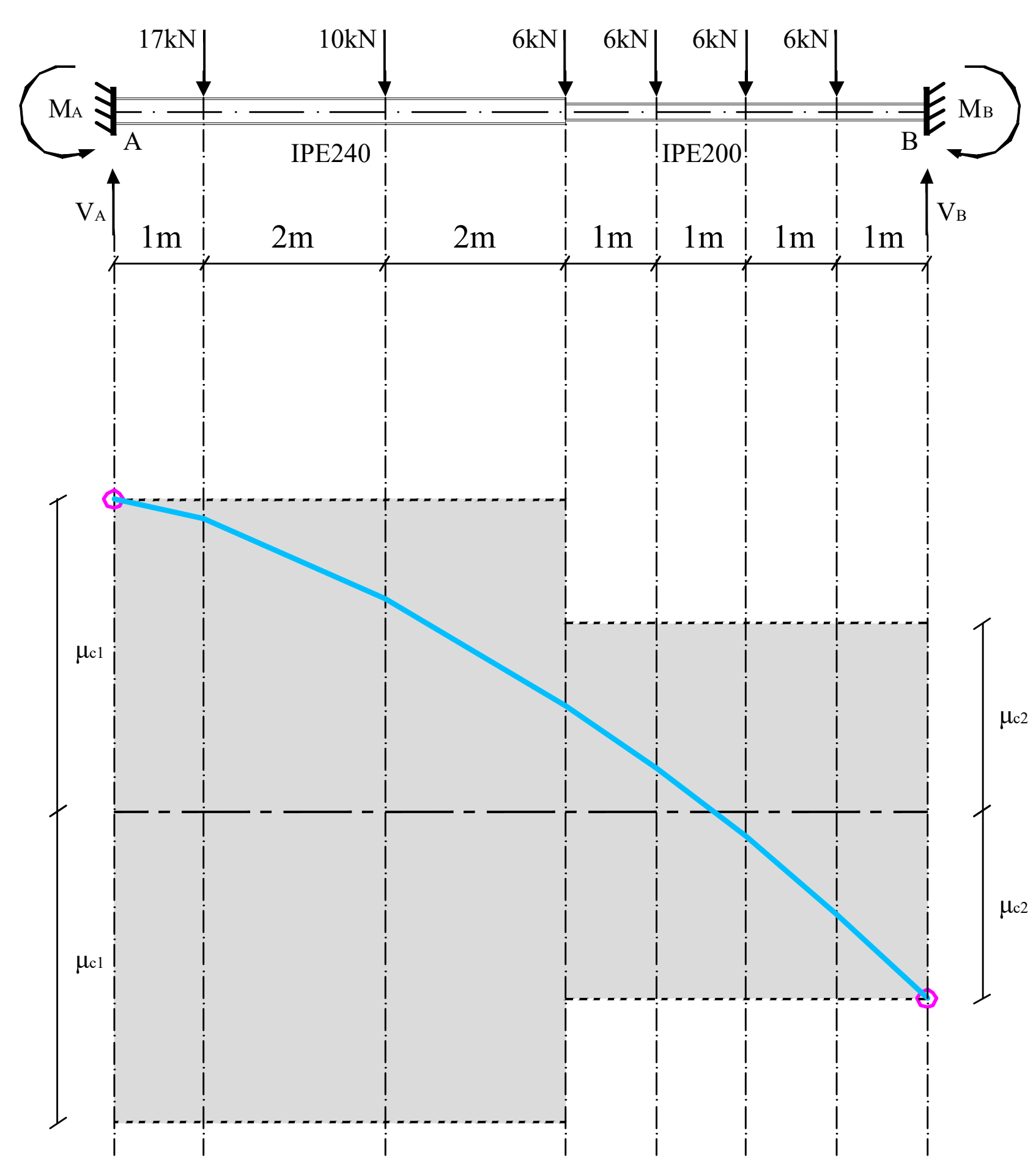


Diagramme de situation [n]

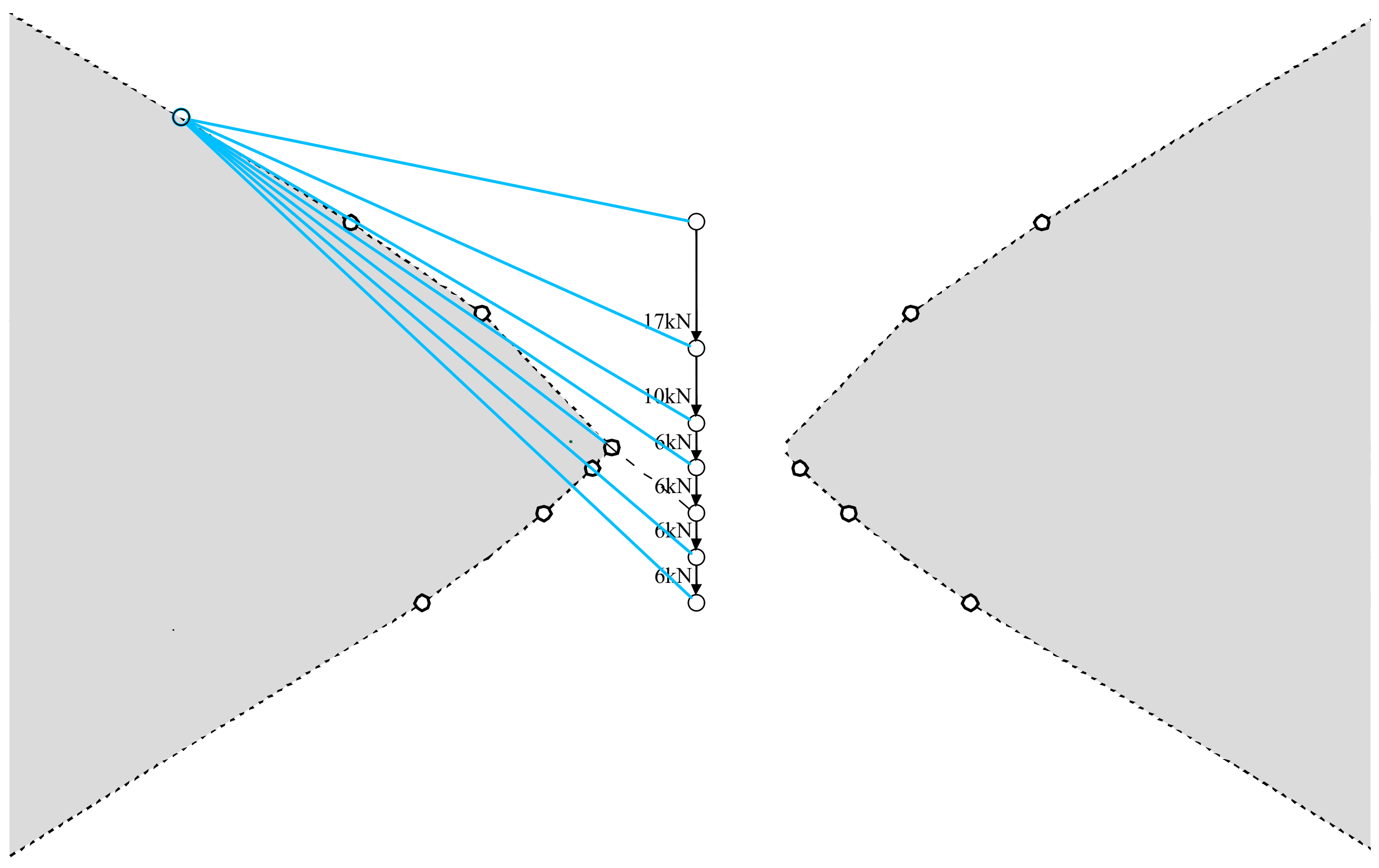


Diagramme des forces [k]

PRÉAMBULE THÉORIQUE À L'ANALYSE STRUCTURALE

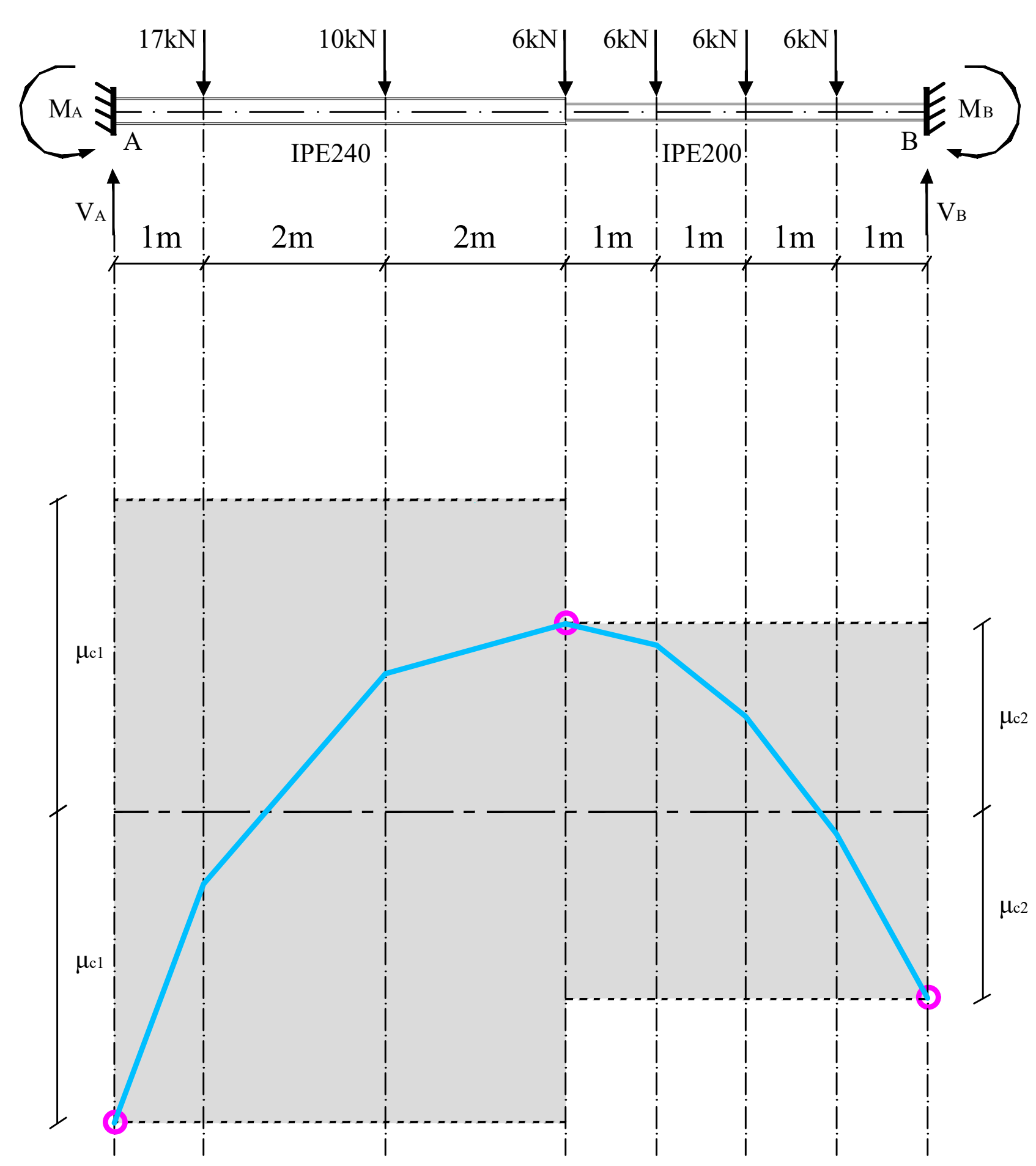


Diagramme de situation [n]

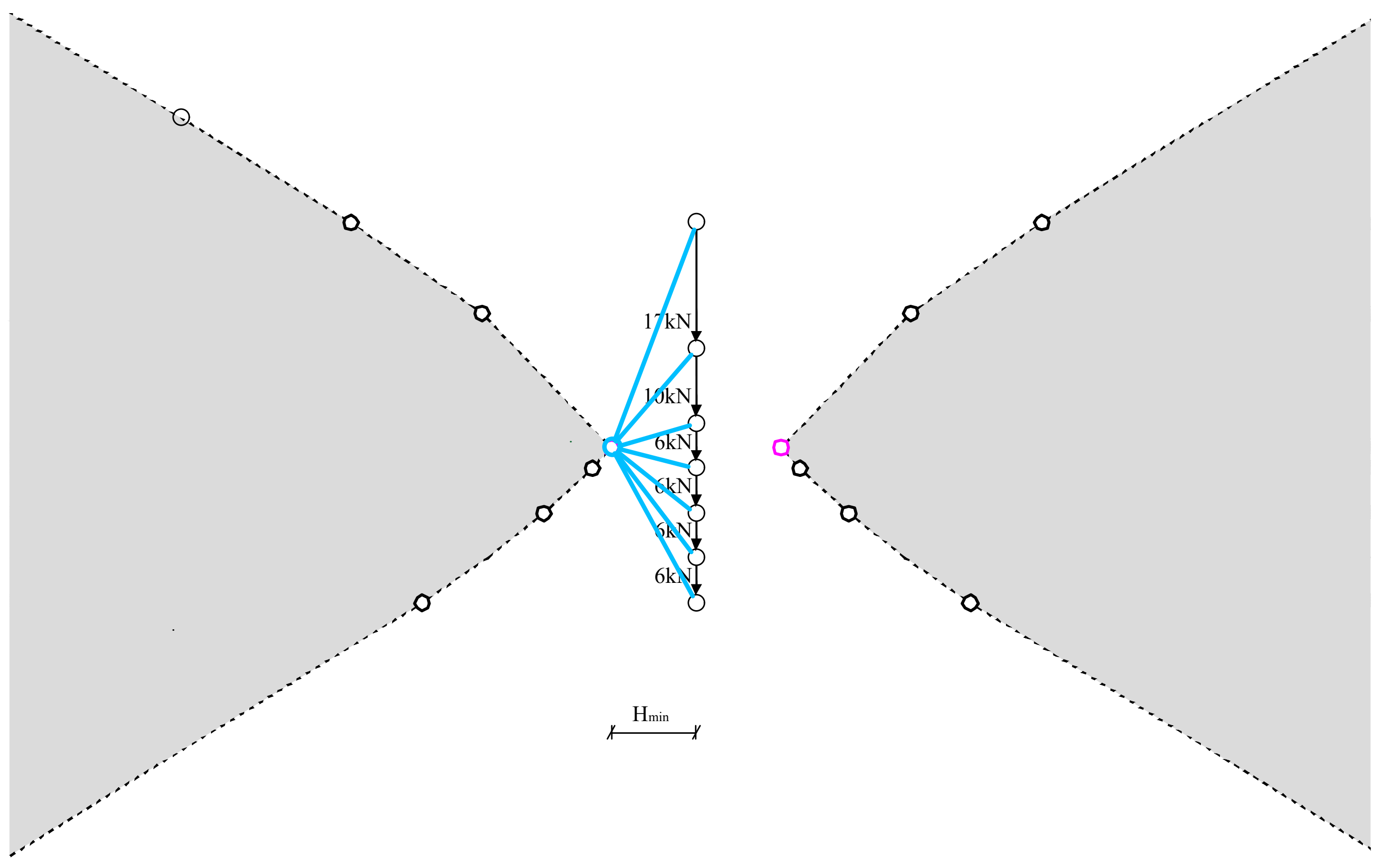


Diagramme des forces [k]

PRÉAMBULE THÉORIQUE À L'ANALYSE STRUCTURALE

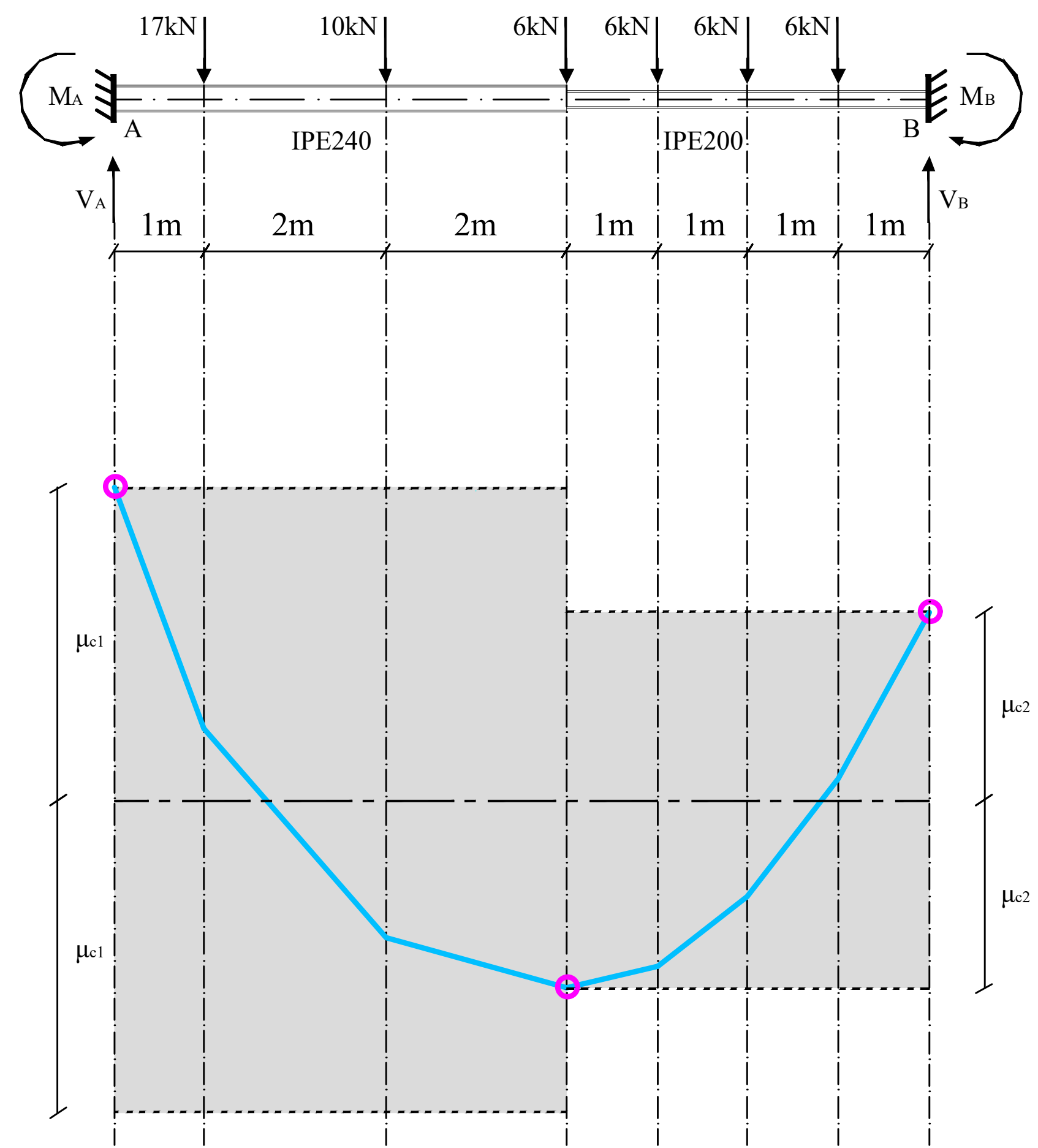


Diagramme de situation [n]

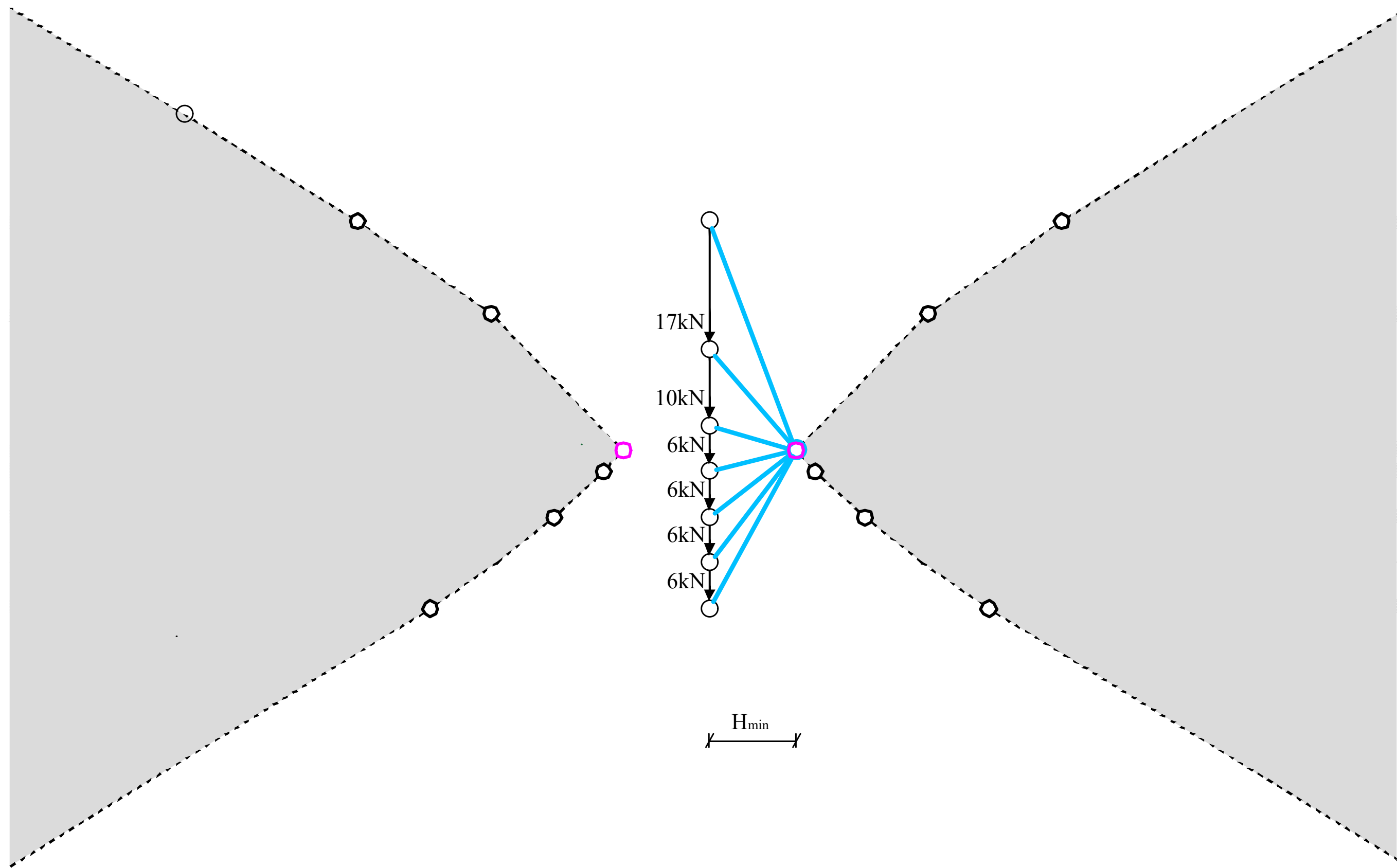


Diagramme des forces [k]

ILLUSTRATION 1 : PONTE DELLA MÙSICA

Ponte della Musica

Rome, 2008-2011

Architects Kit Powell-Williams [London]

Engineers C. Lotti & Associati [Rome]

Consulting engineers Buro Happold [London]

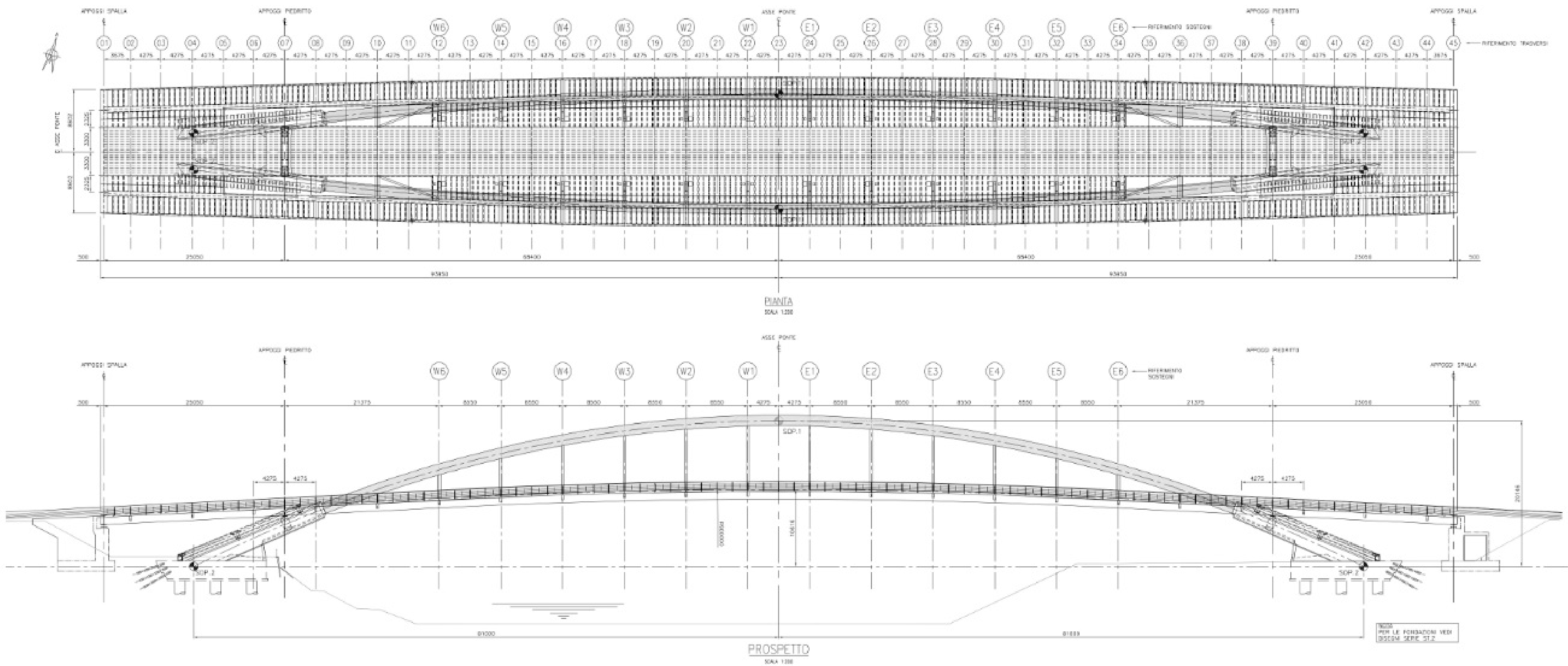
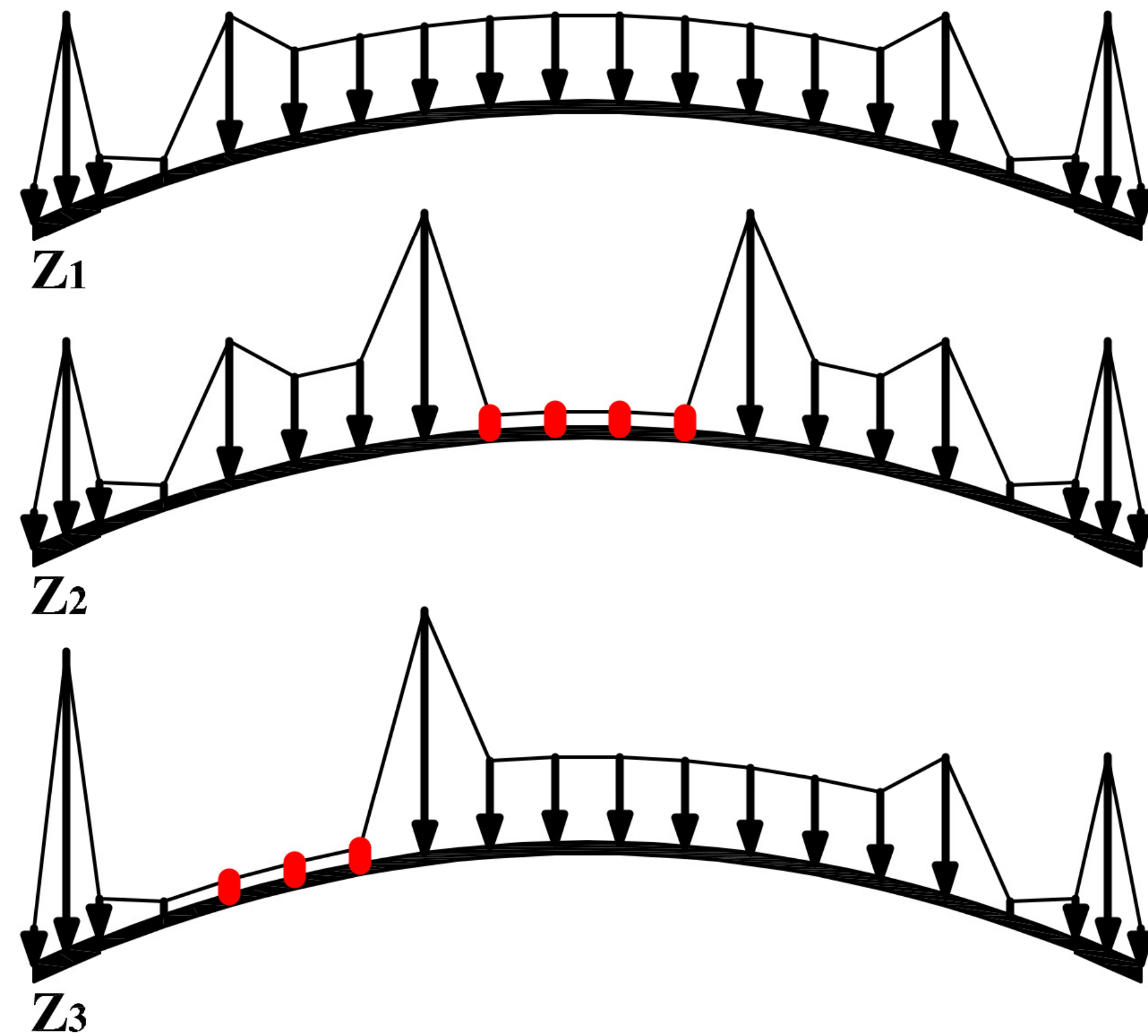


ILLUSTRATION 1 : PONTE DELLA MÙSICA

Cas de charges

Exploitation symétrique



Exploitation asymétrique

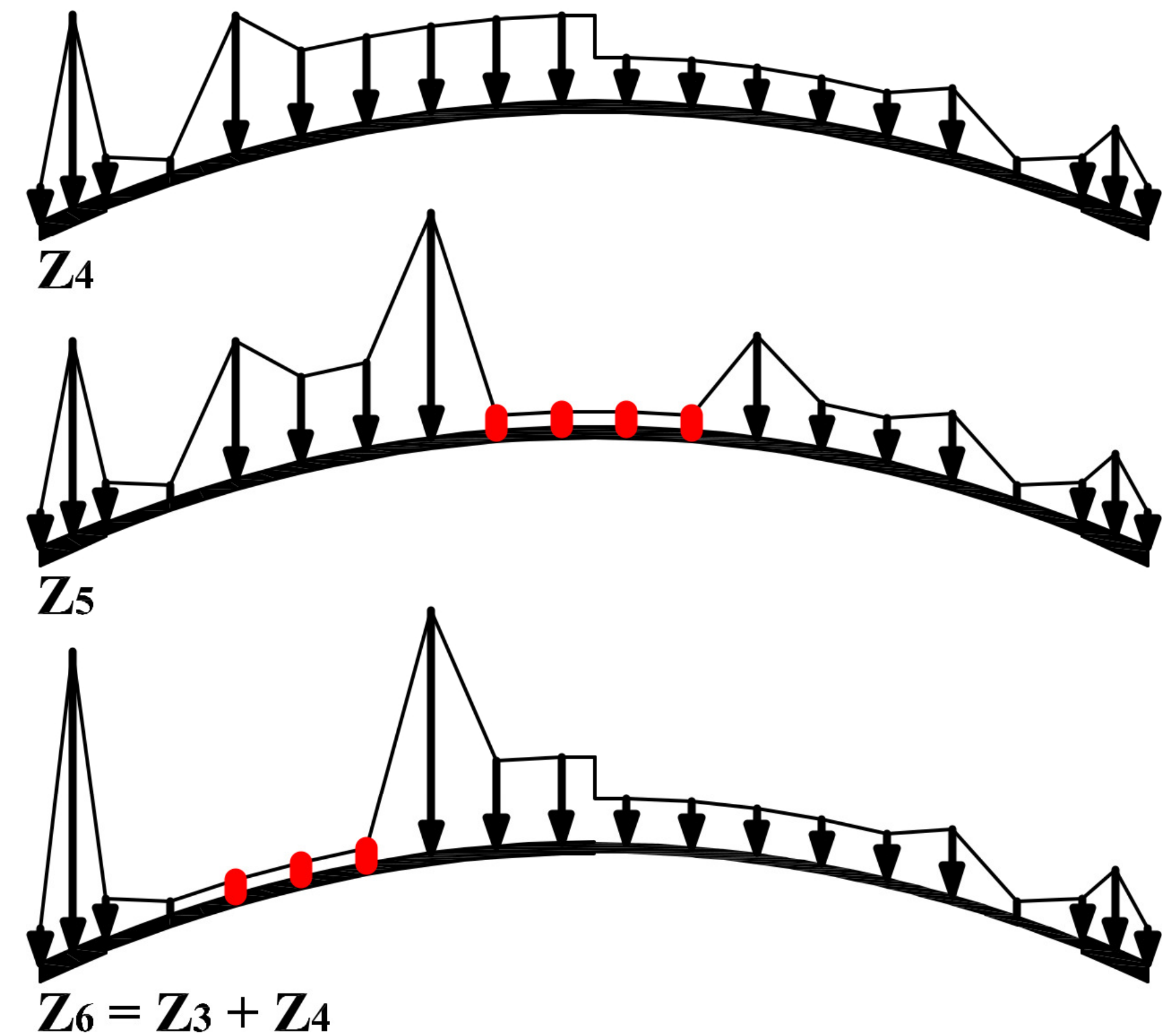


ILLUSTRATION 1 : PONTE DELLA MÙSICA

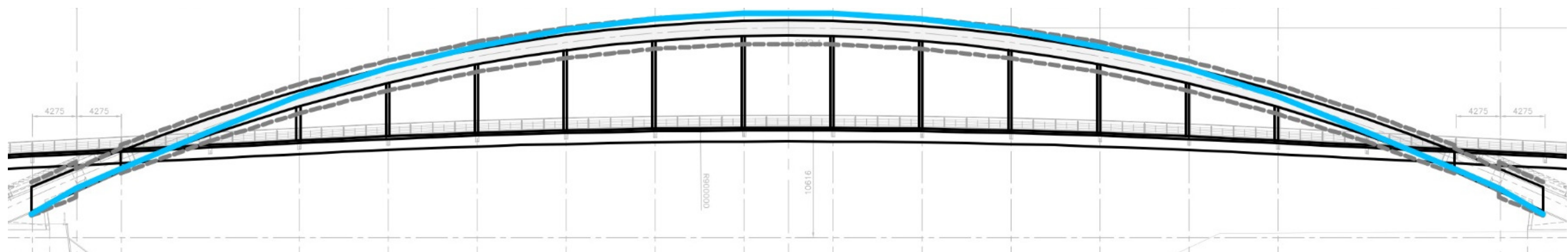
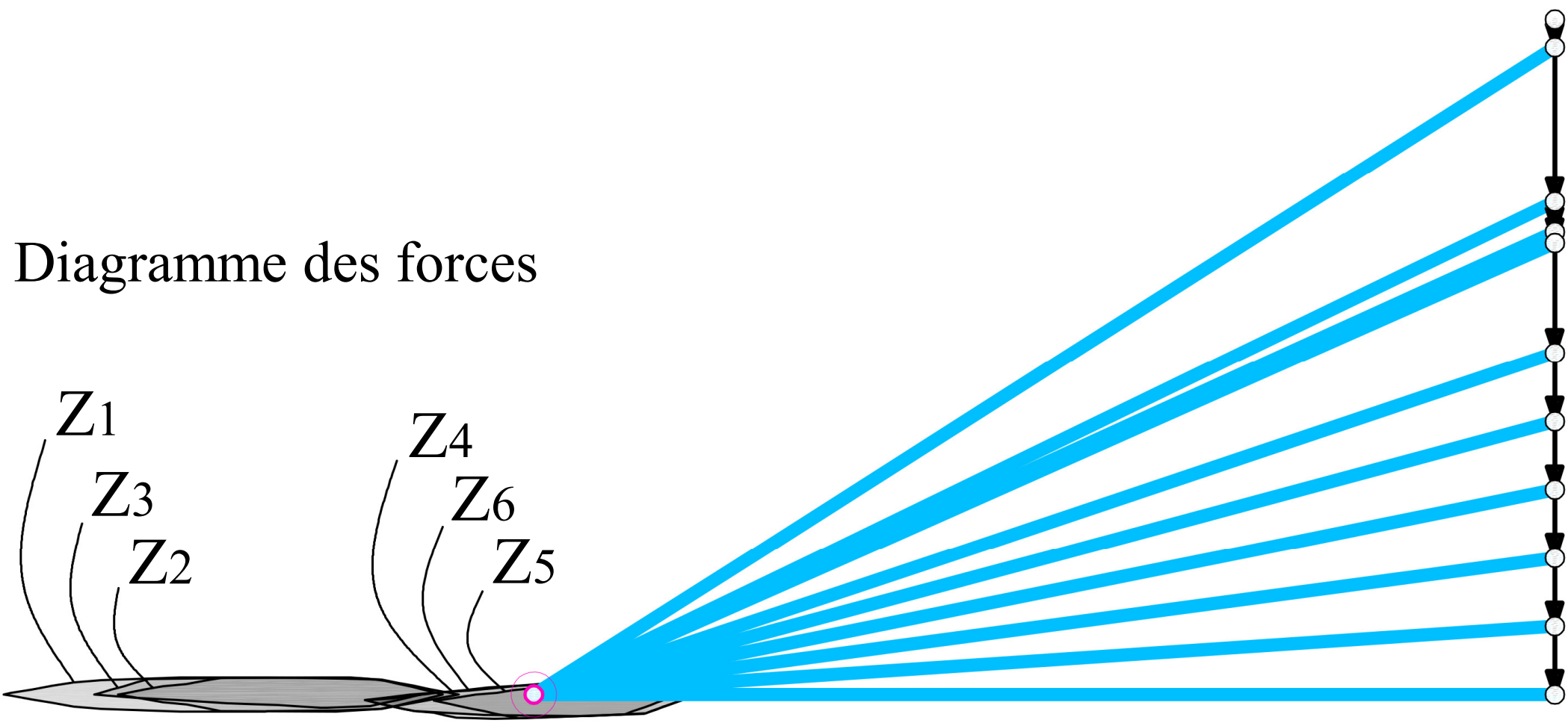


Diagramme de situation



A [MN²]	Intact	4C	3G
Qsym	4,50	3,15	2,77
Qasym	2,78	1,73	2,76

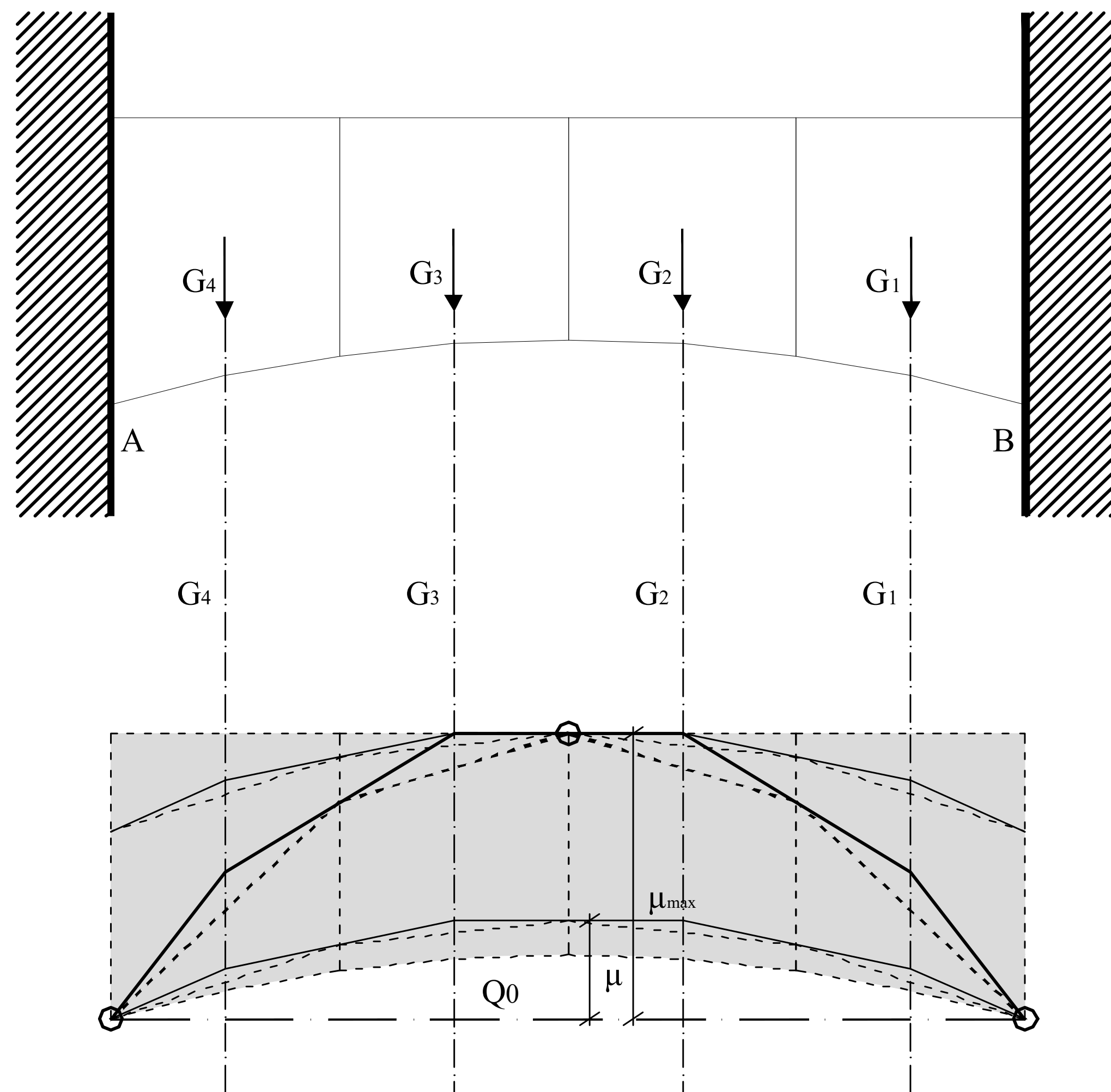


Diagramme de situation [n]

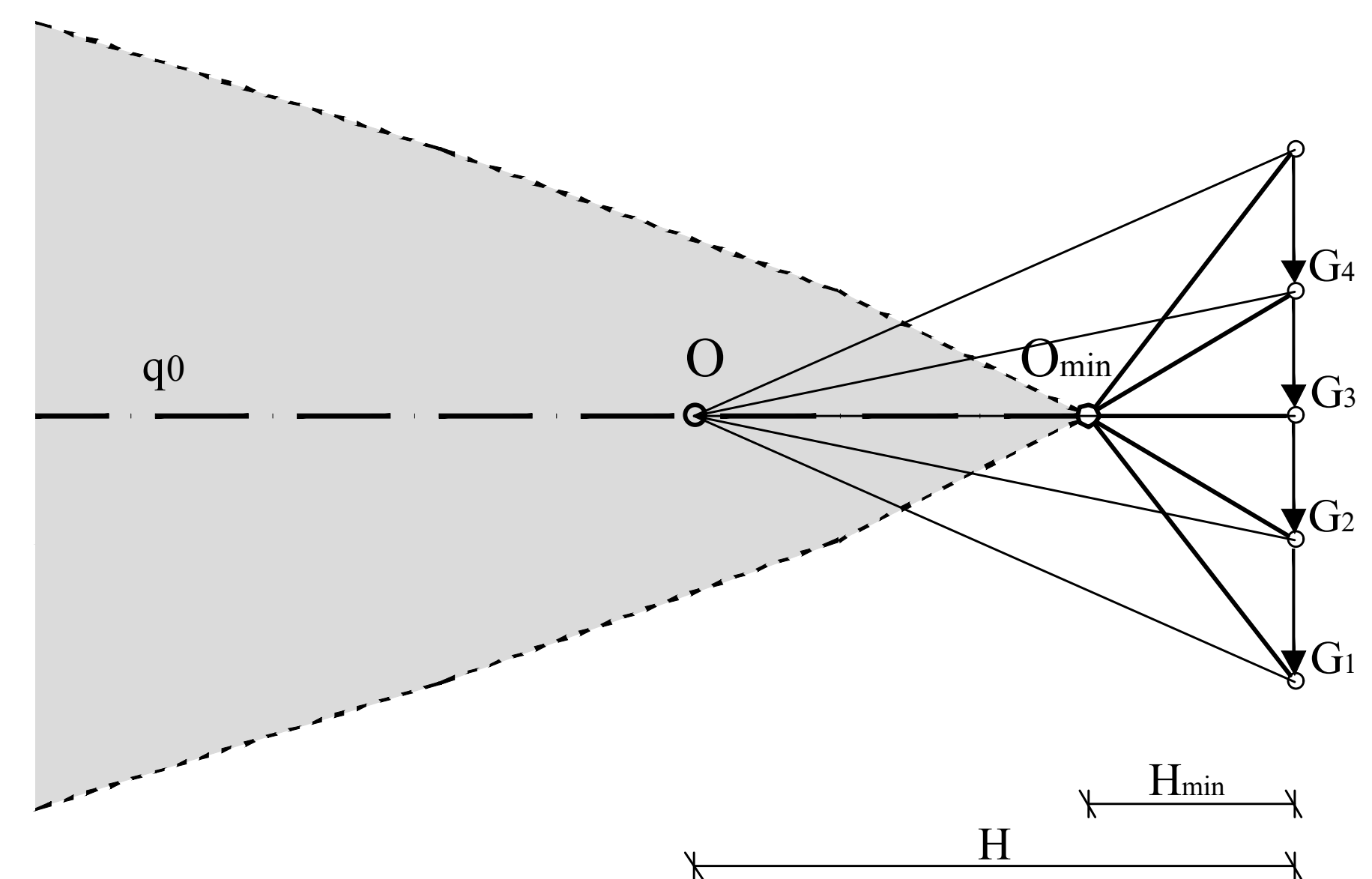


Diagramme des forces [k]

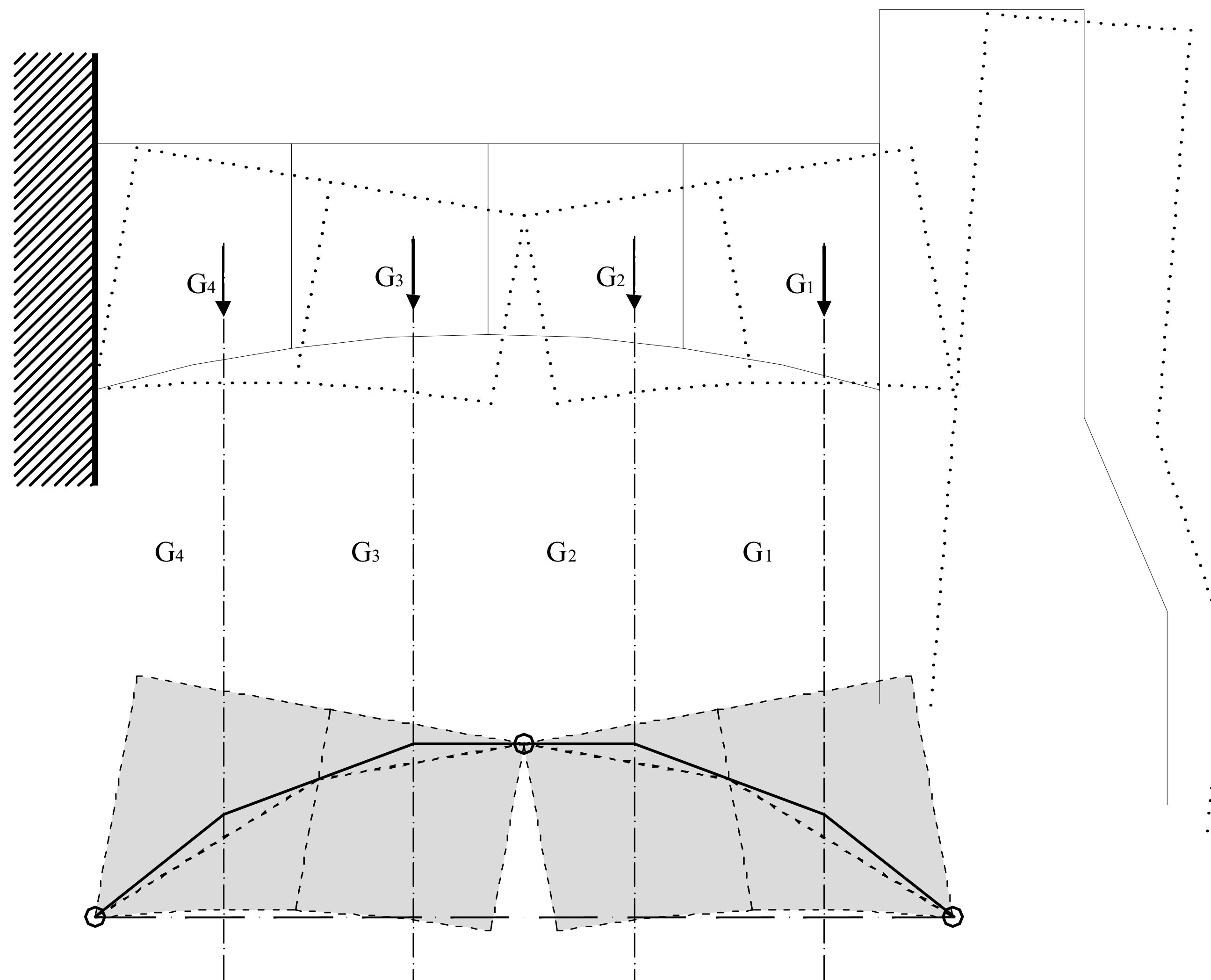
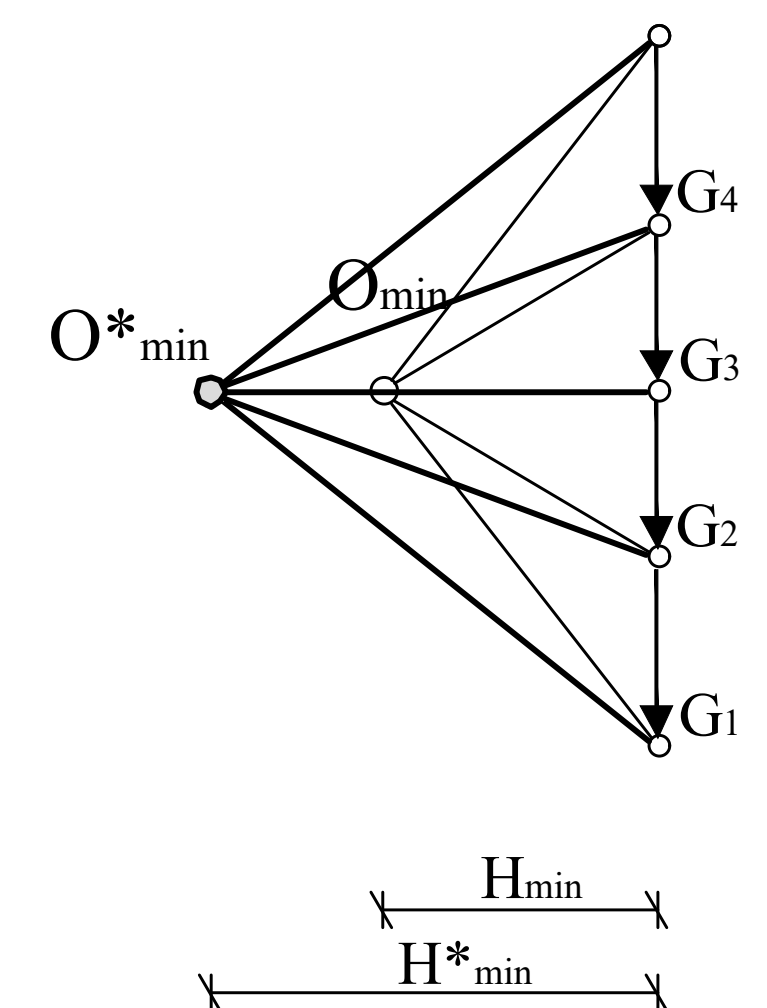


Diagramme de situation [n]

Diagramme des forces [k]



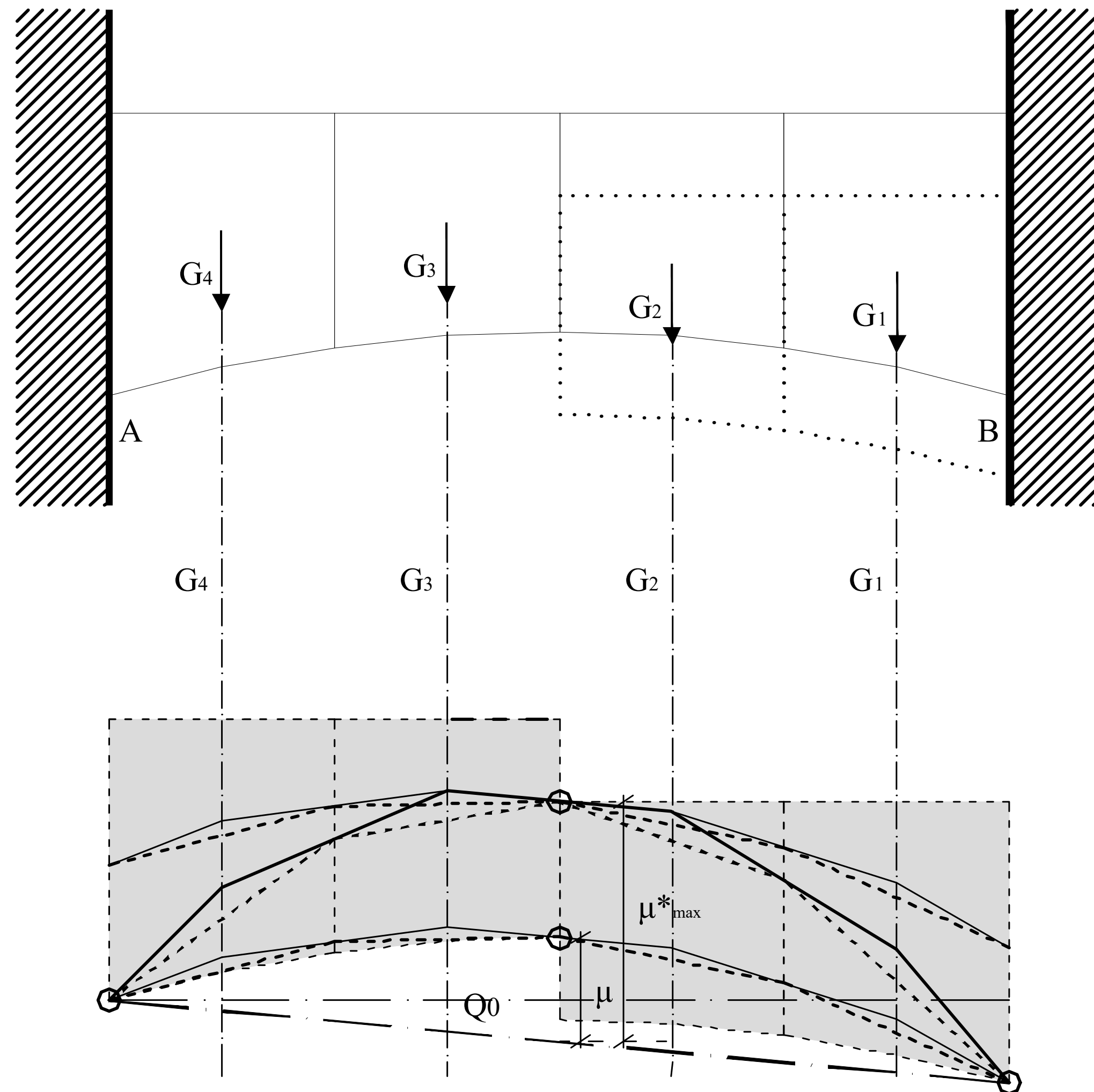


Diagramme de situation [n]

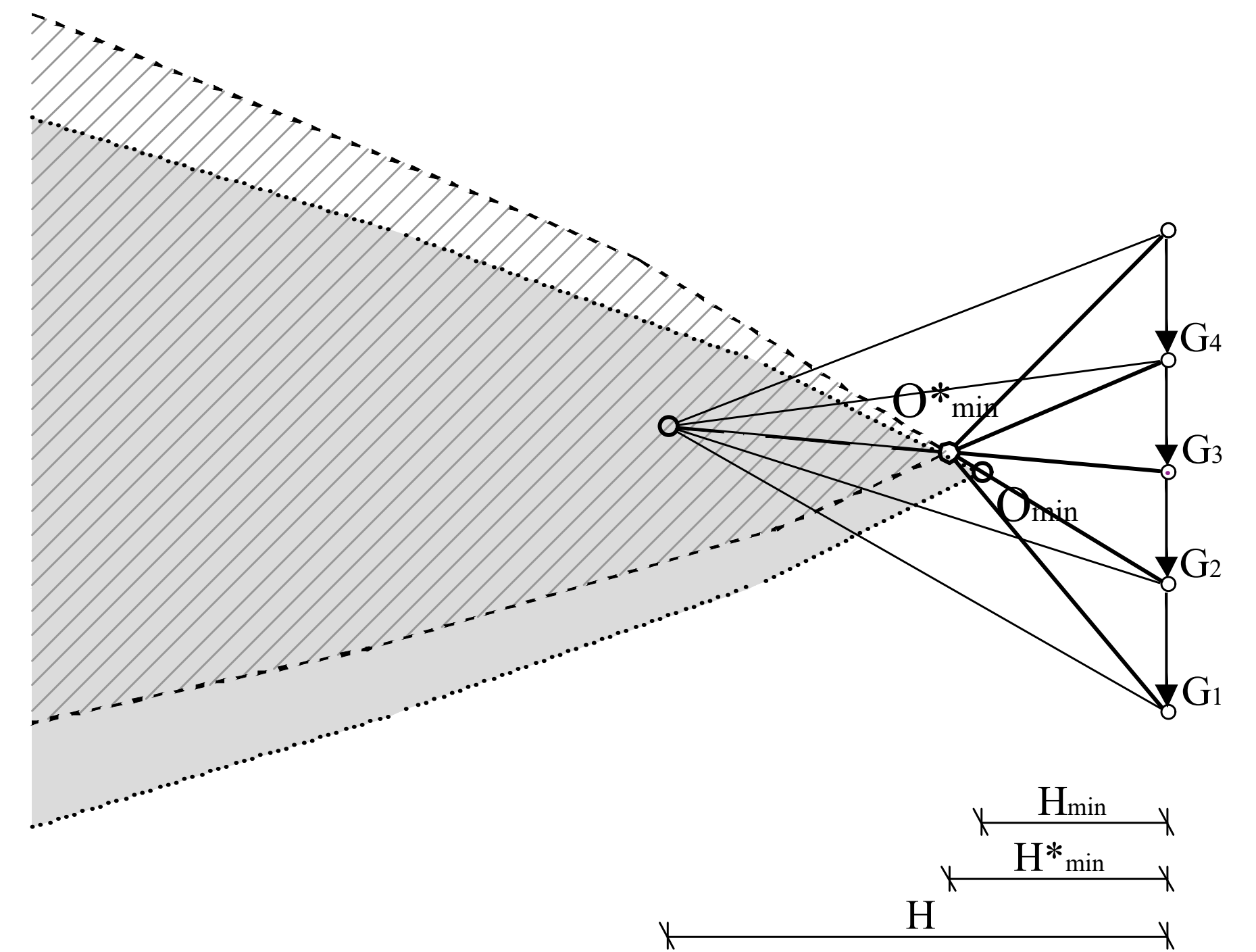


Diagramme des forces [k]

ILLUSTRATION 2 : ARC MAÇONNÉ

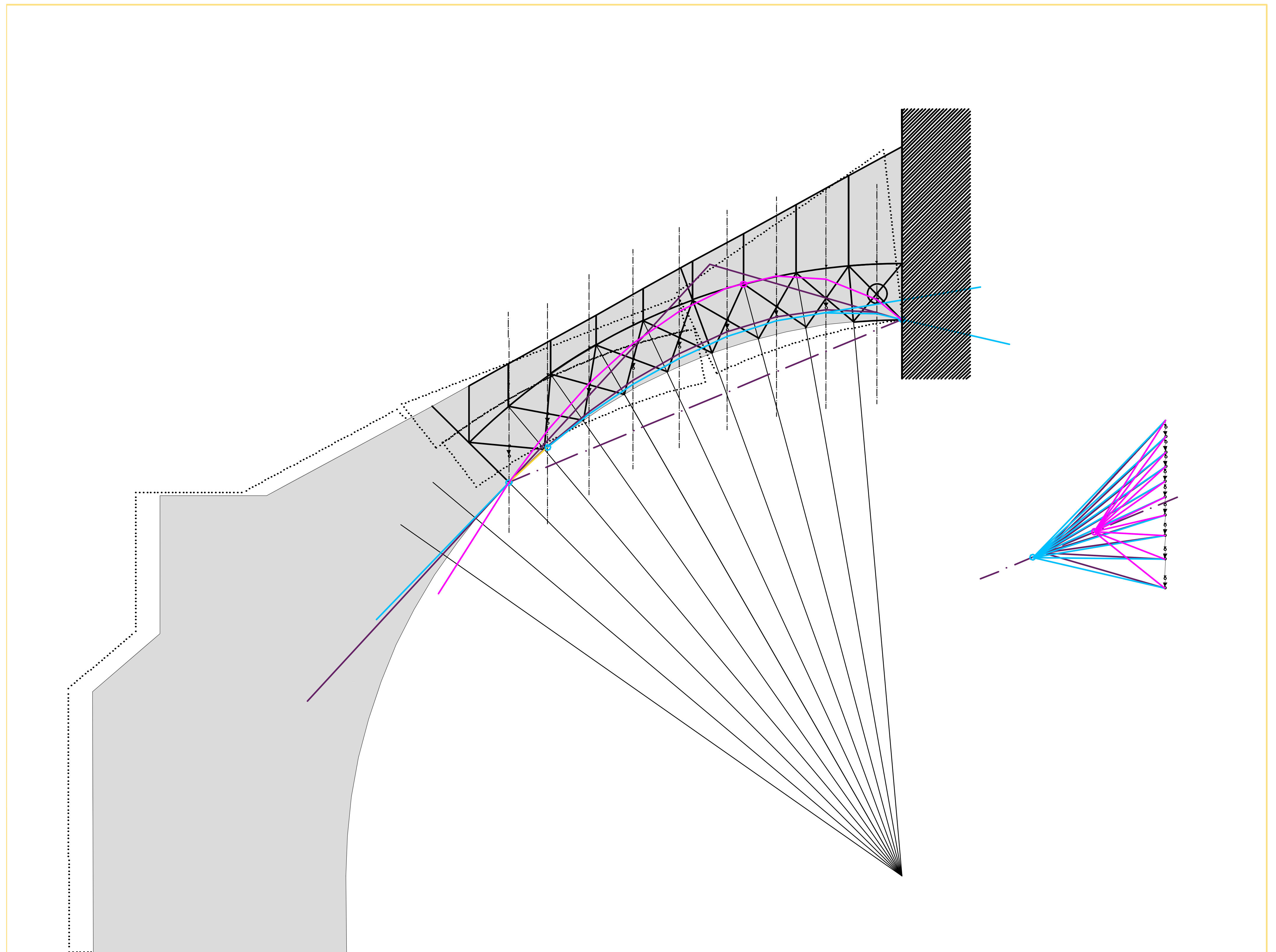
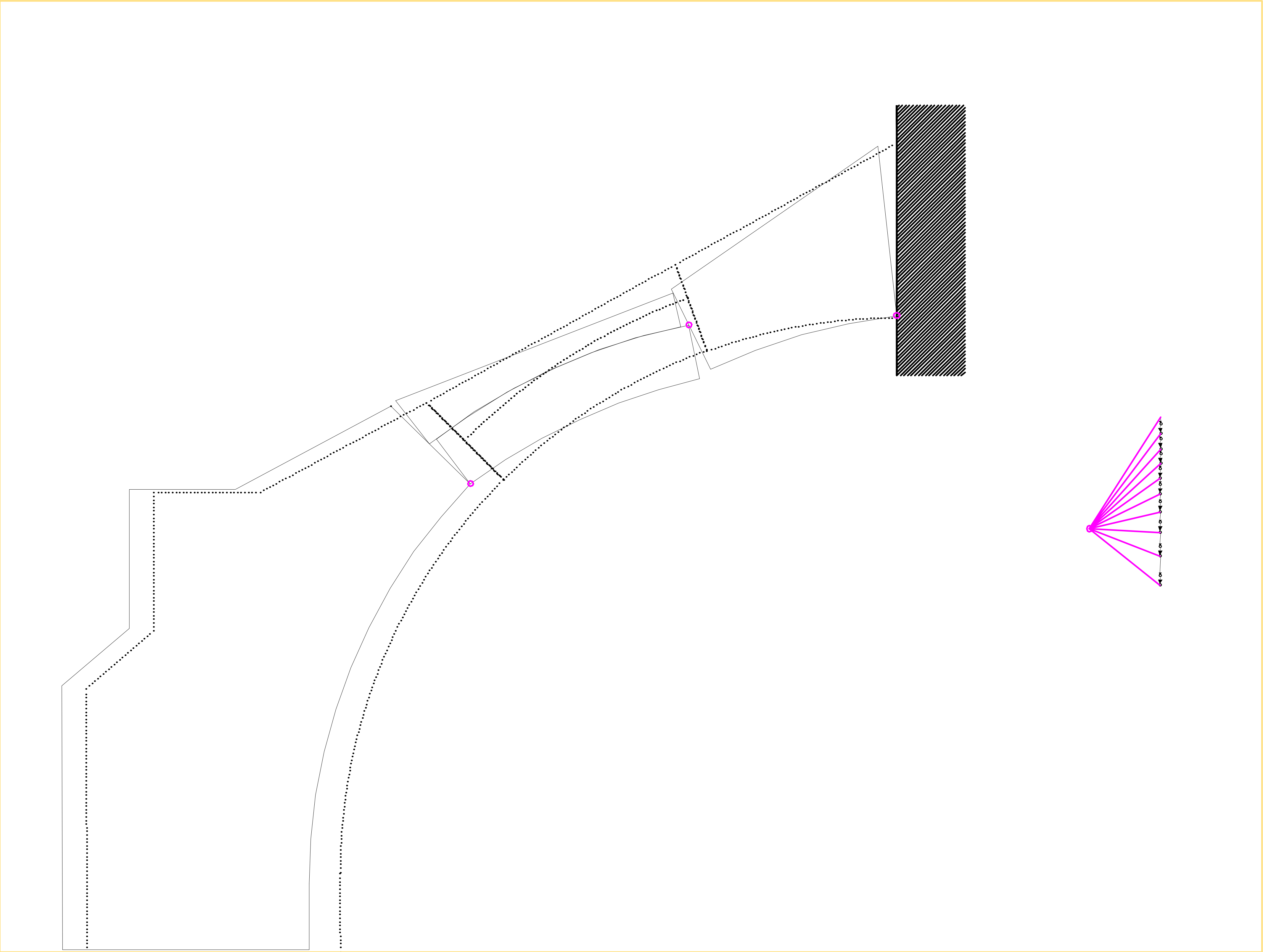


ILLUSTRATION 2 : ARC MAÇONNÉ



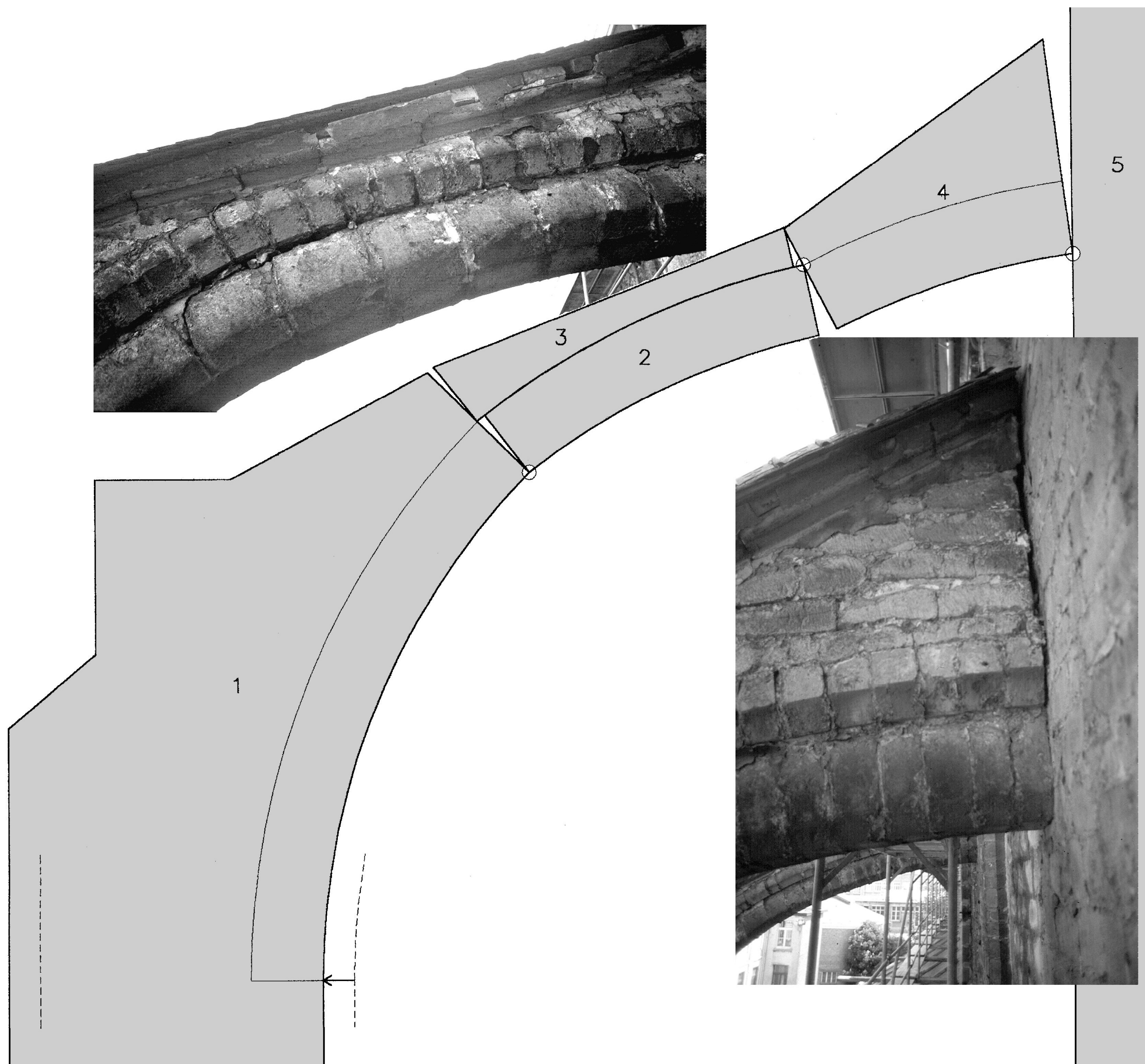


Fig. 50 : Arc-boutant de l'église ND aux Dominicains à Leuven (schéma)