

Chiffrement à clé symétrique distribuée sans confiance



**POLYTECHNIQUE
MONTREAL**

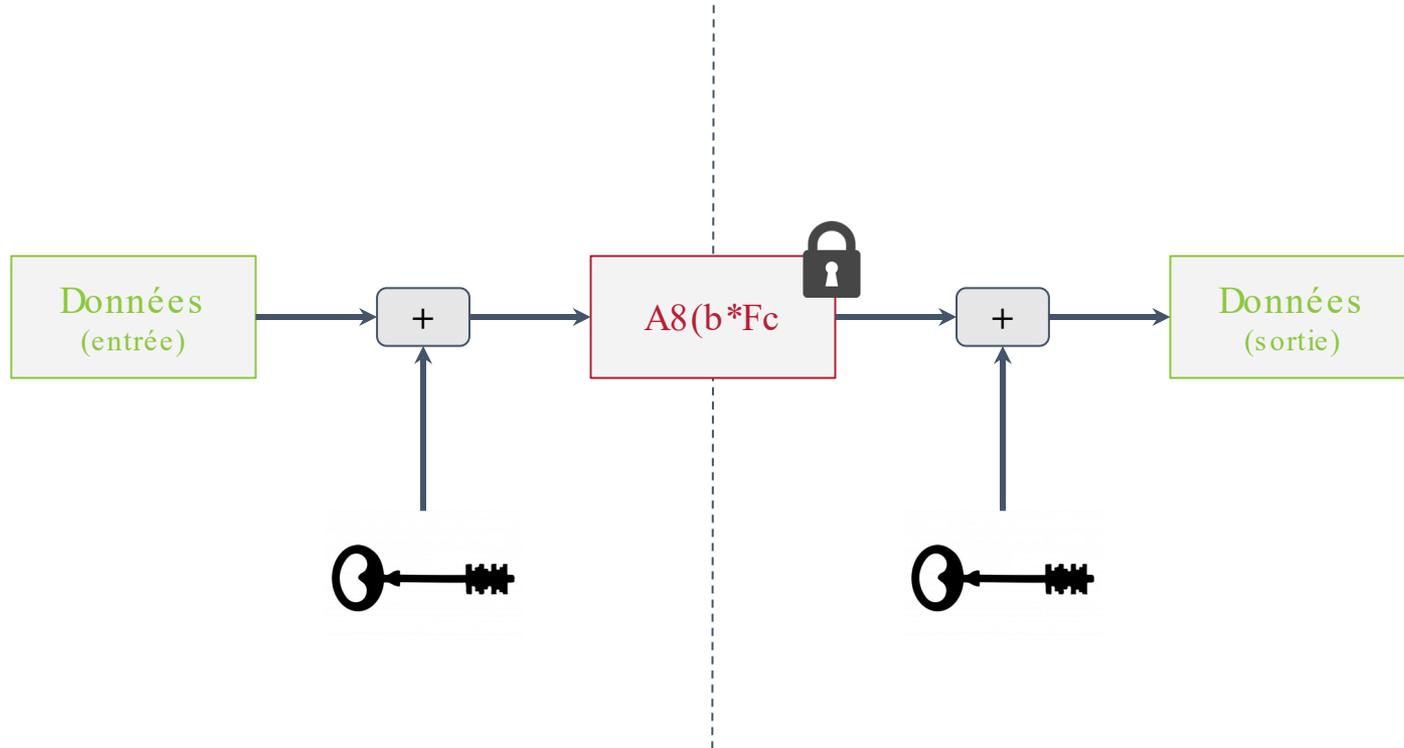
UNIVERSITÉ
D'INGÉNIERIE

UQAC

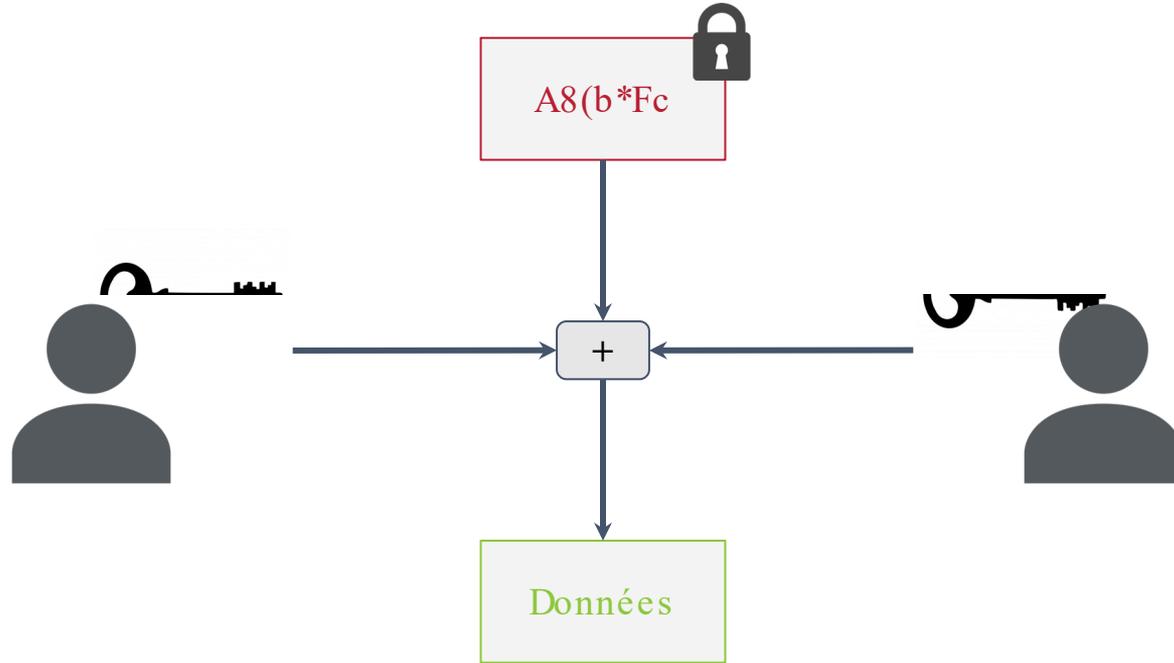
Université du Québec
à Chicoutimi

Florian Le Mouël
7 Mai 2025

- 1. Notions de cryptographie**
2. Propriétés de notre protocole
3. Applications
4. Introduction au partage de secret

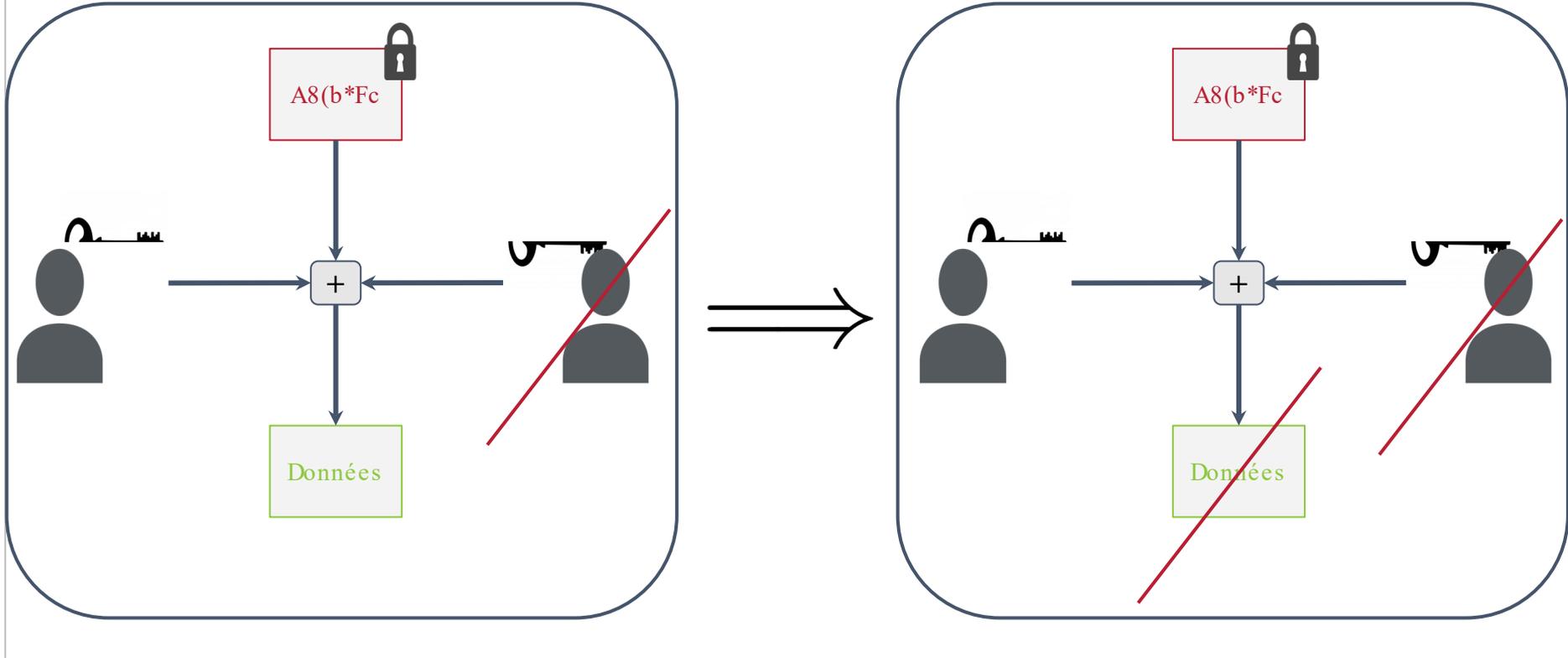




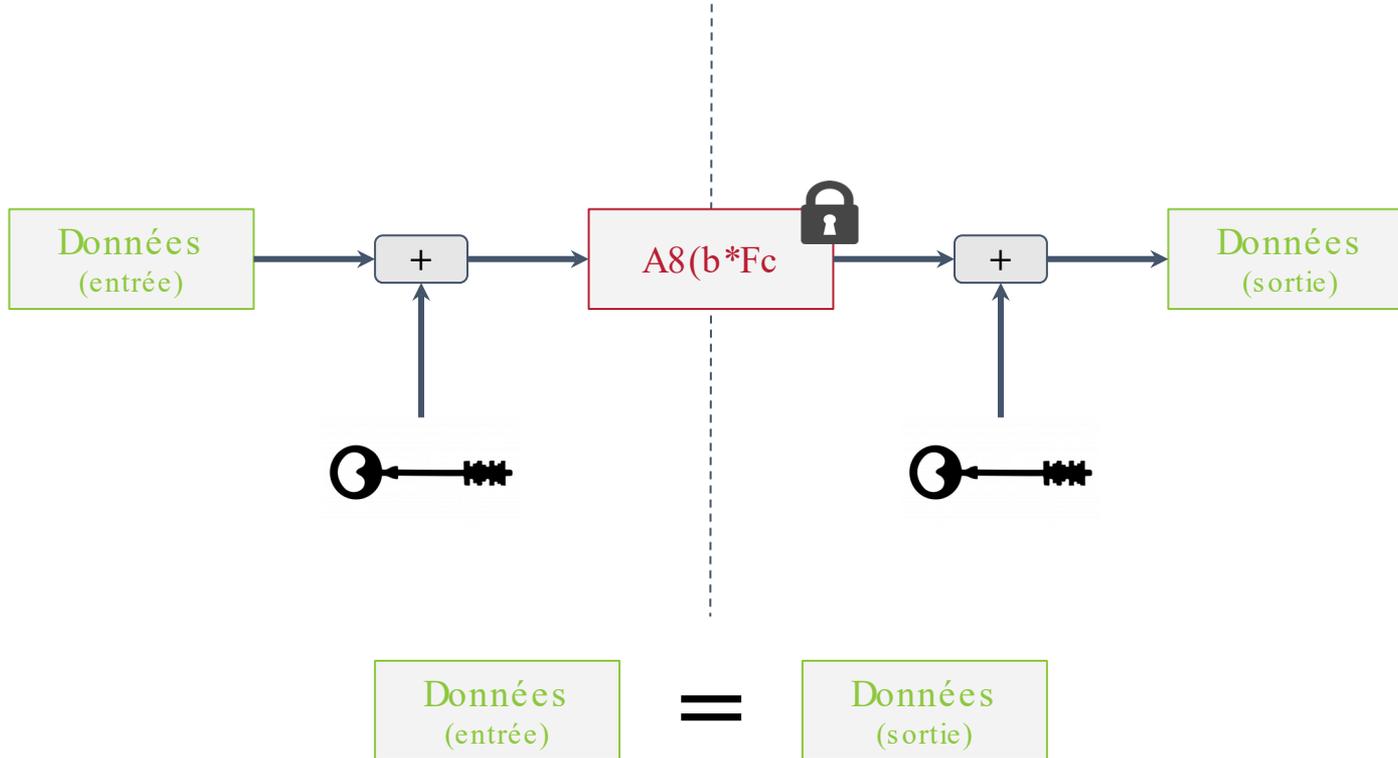


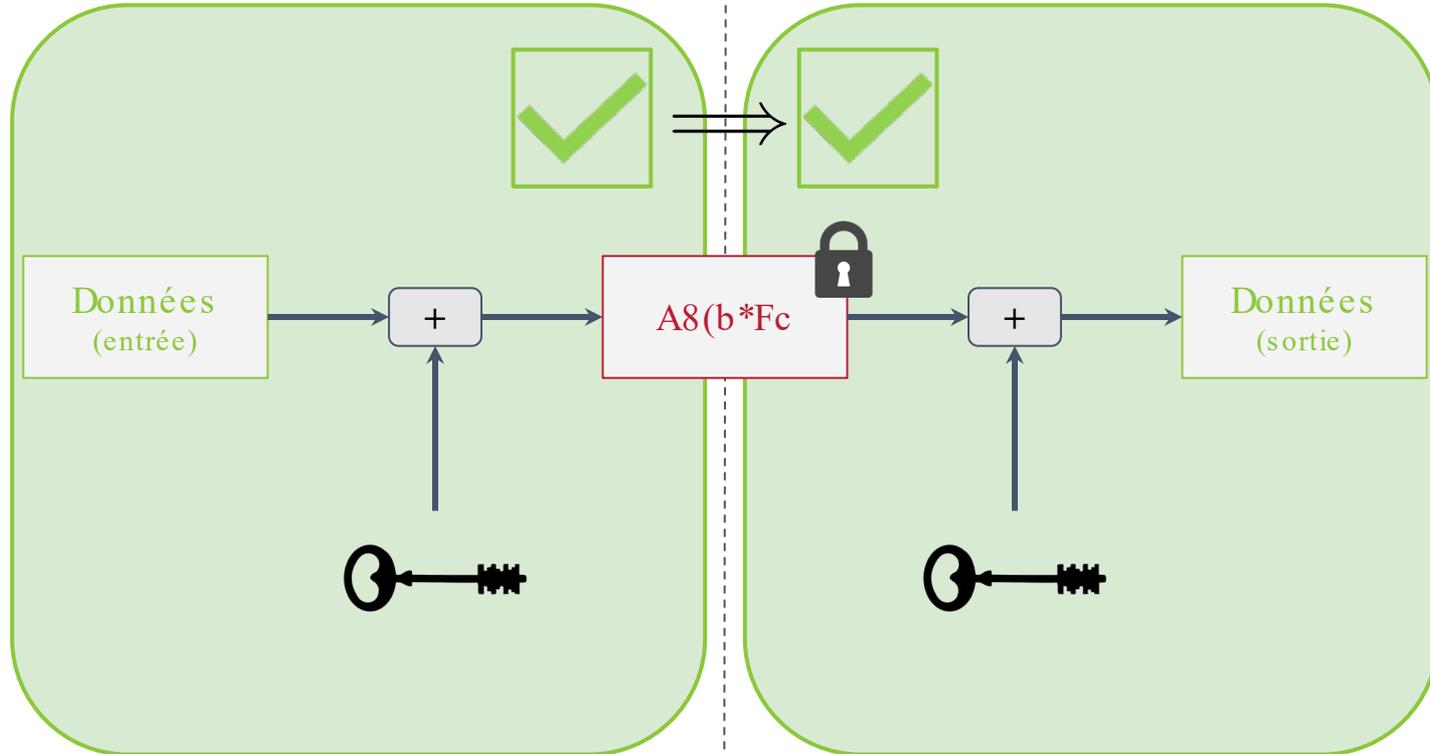
1. Notions de cryptographie
- 2. Propriétés de notre protocole**
3. Applications
4. Introduction au partage de secret

CONFIDENTIALITÉ- AUTHENTICITÉ- CORRECTION- PAS DE TIER DE CONFIANCE

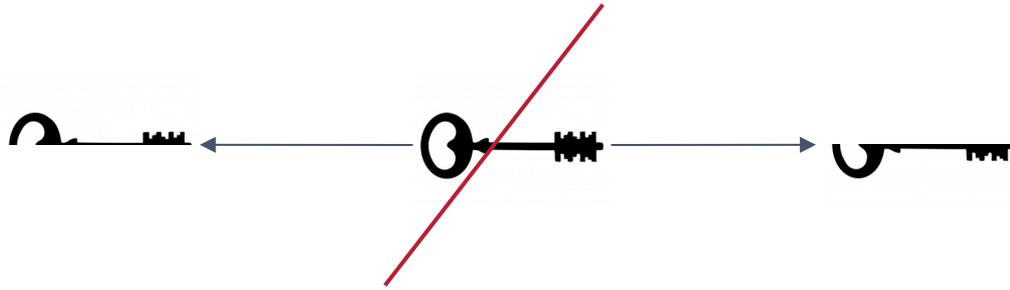


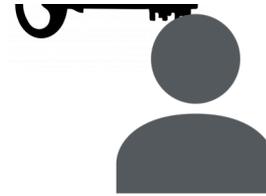
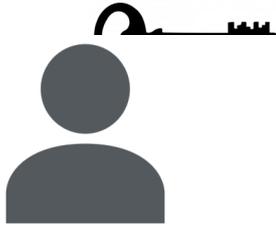
CONFIDENTIALITÉ- AUTHENTICITÉ- CORRECTION- PAS DE TIER DE CONFIANCE



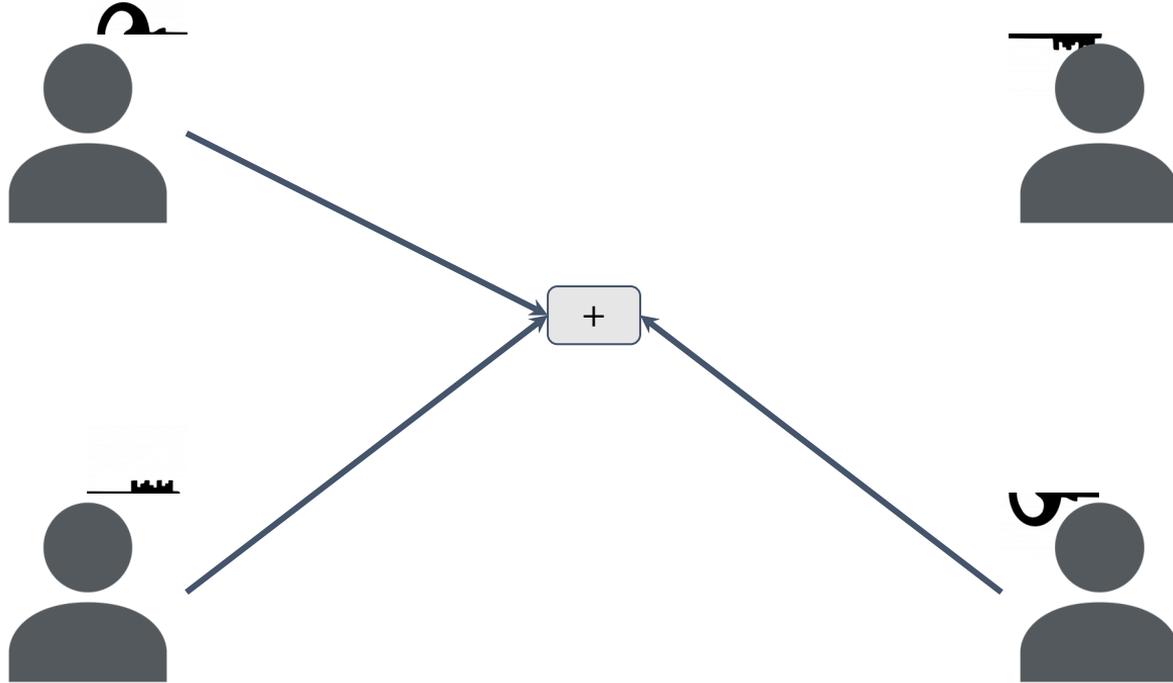


CONFIDENTIALITÉ- AUTHENTICITÉ- CORRECTION- PAS DE TIER DE CONFIANCE

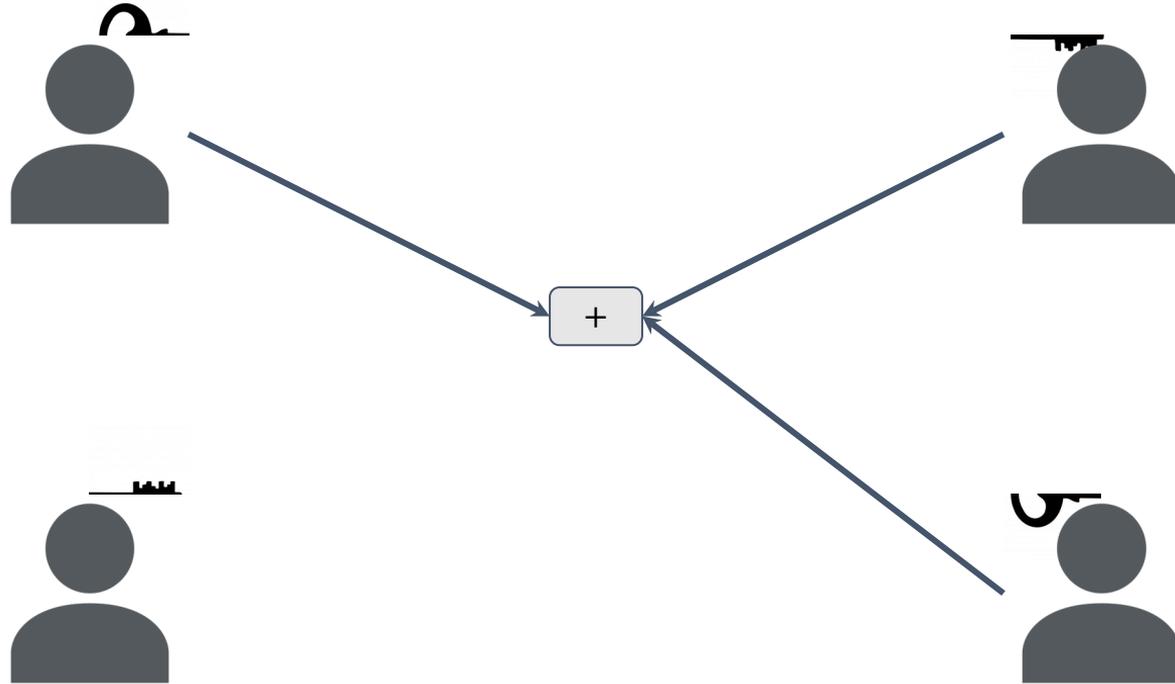




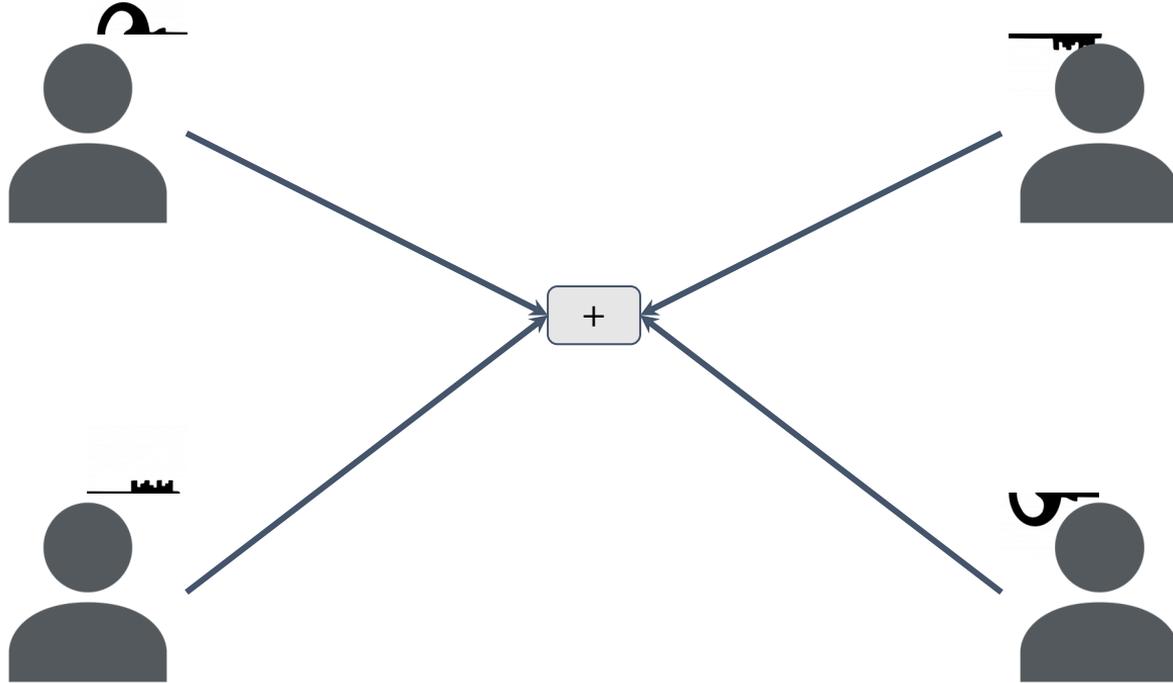
PROPRIÉTÉ ADDITIONNELLE CLÉ DISTRIBUÉE À SEUIL



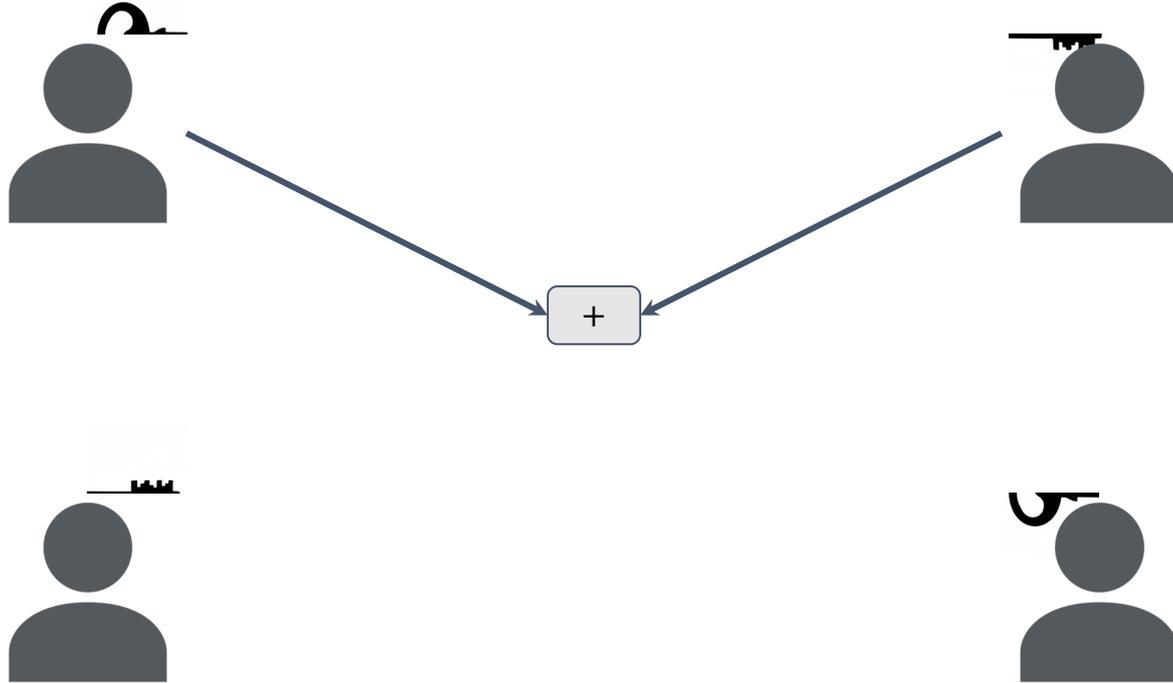
PROPRIÉTÉ ADDITIONNELLE CLÉ DISTRIBUÉE À SEUIL



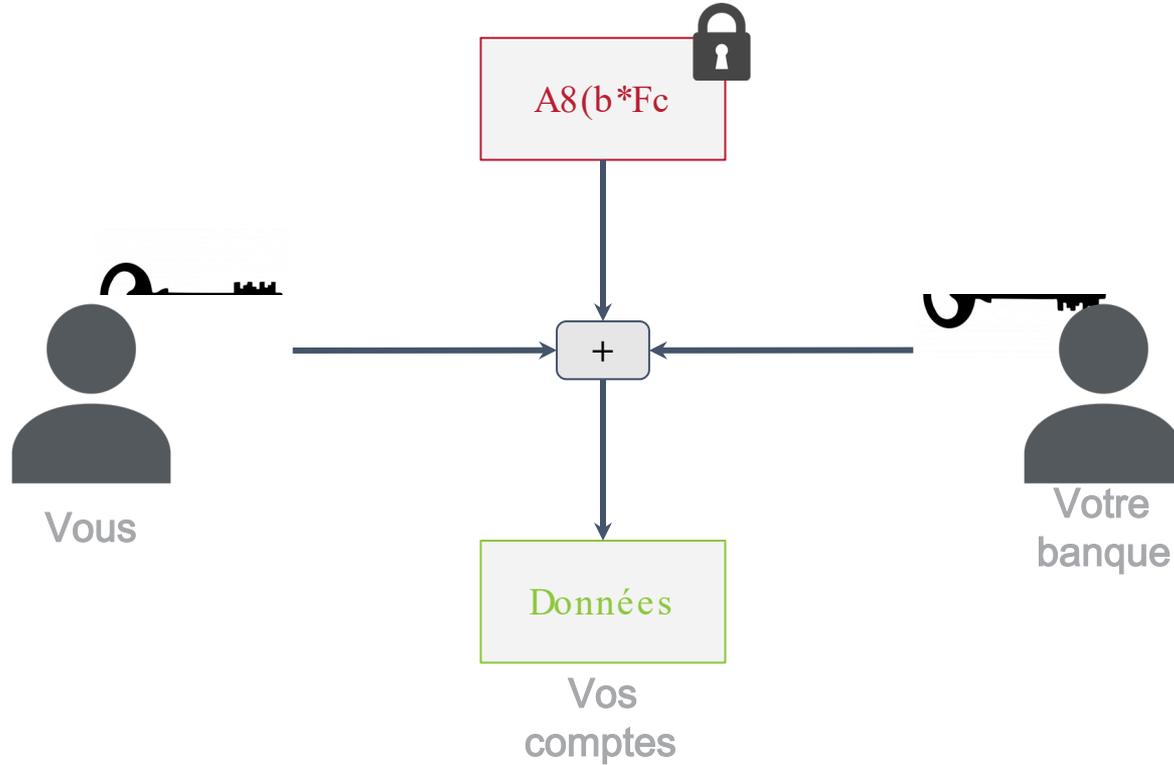
PROPRIÉTÉ ADDITIONNELLE CLÉ DISTRIBUÉE À SEUIL

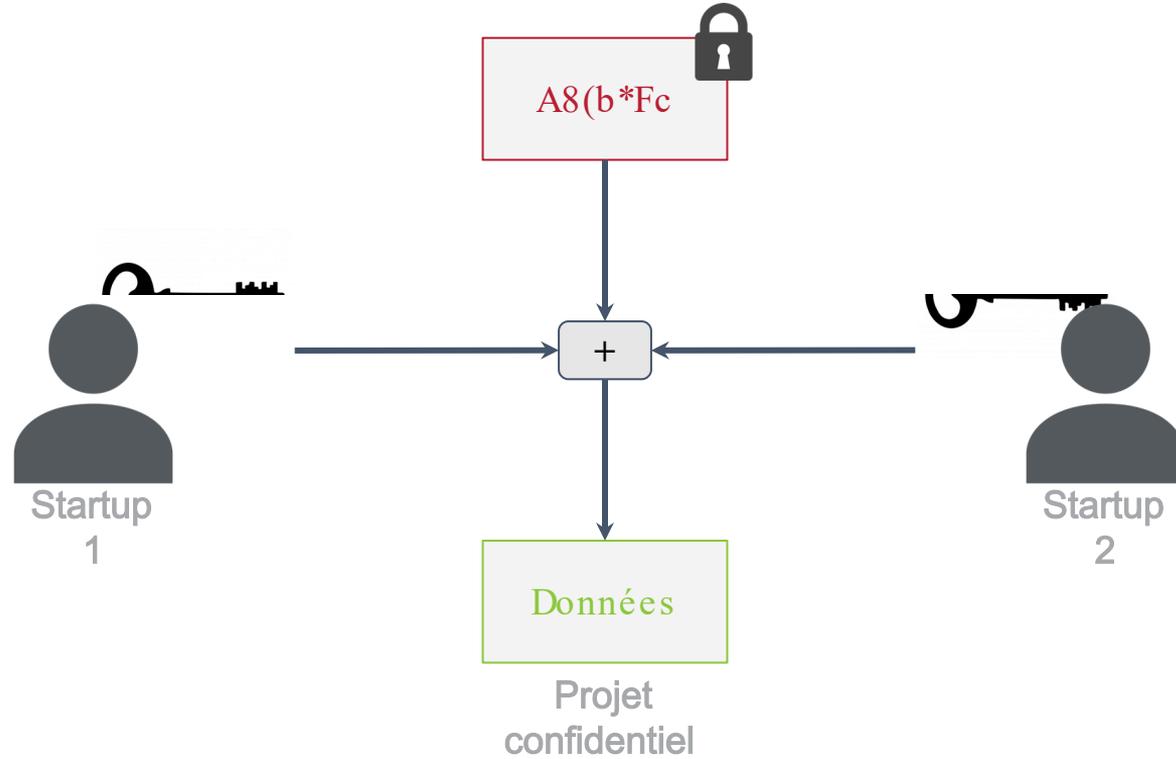


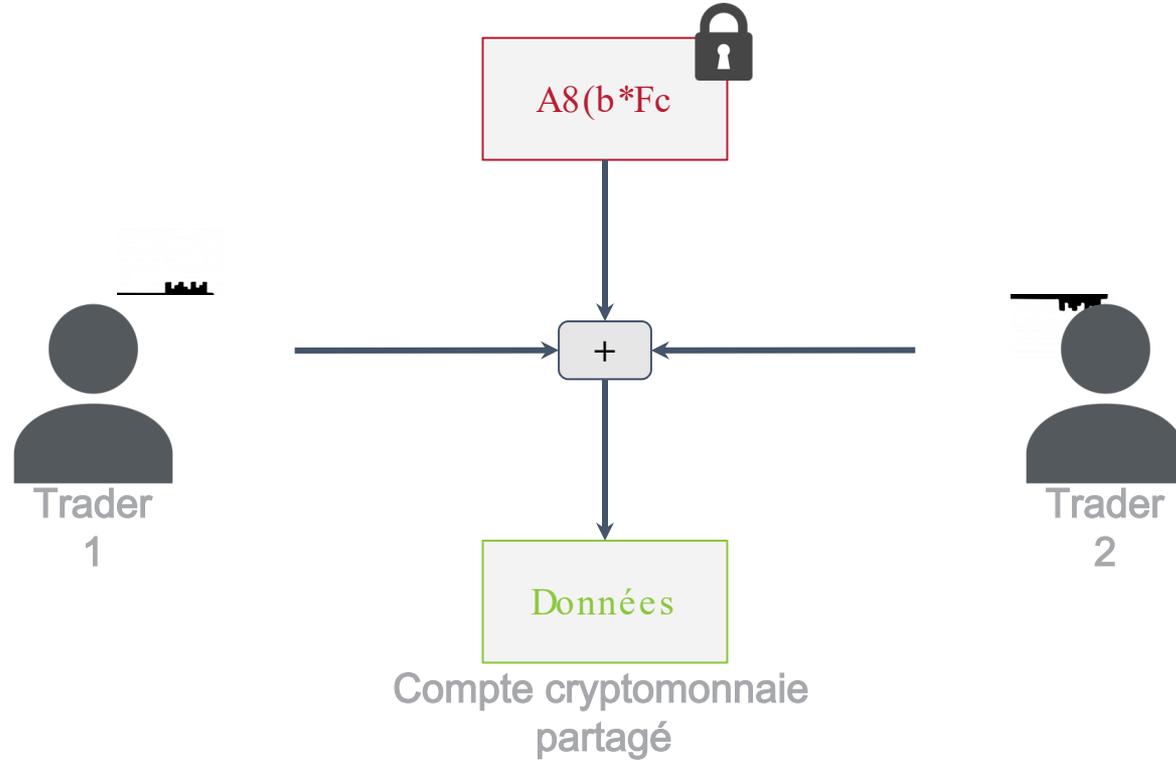
PROPRIÉTÉ ADDITIONNELLE CLÉ DISTRIBUÉE À SEUIL



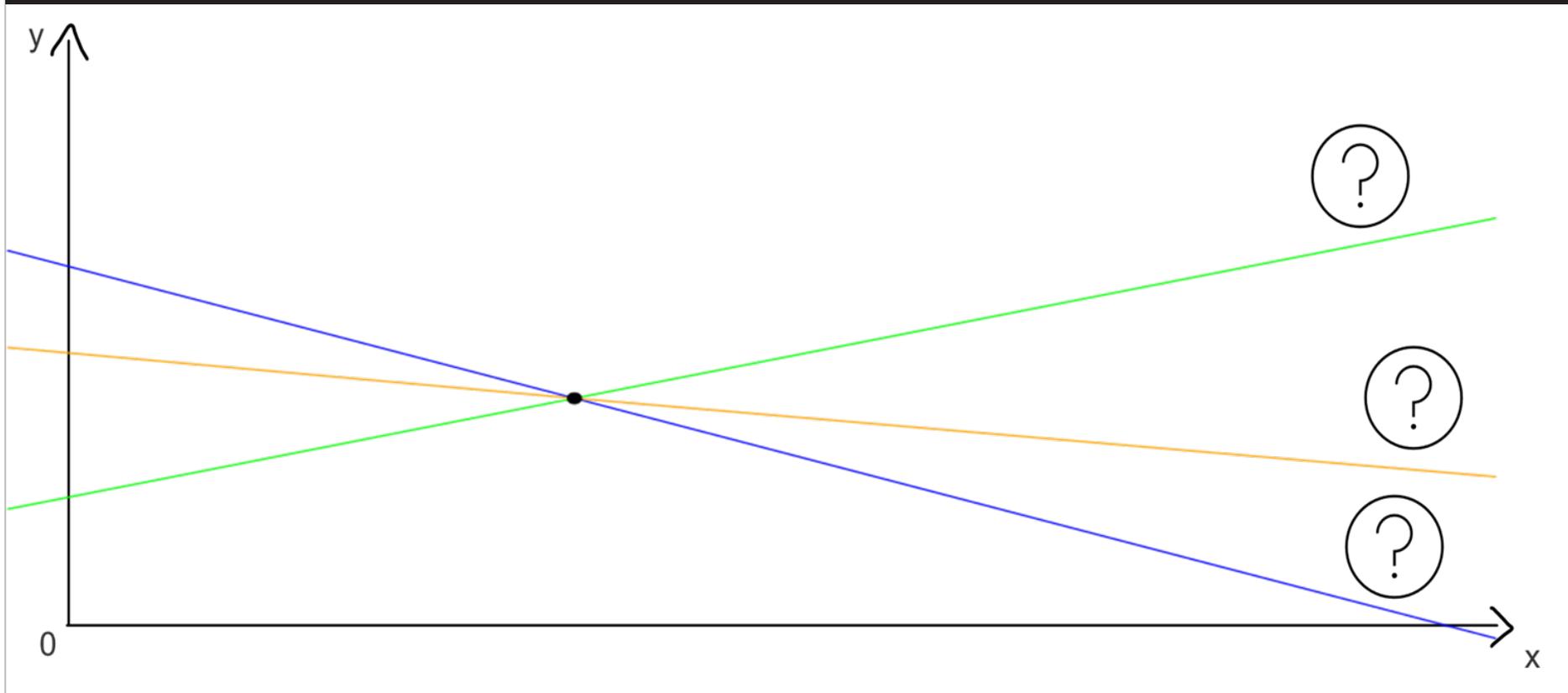
1. Notions de cryptographie
2. Propriétés de notre protocole
- 3. Applications**
4. Introduction au partage de secret

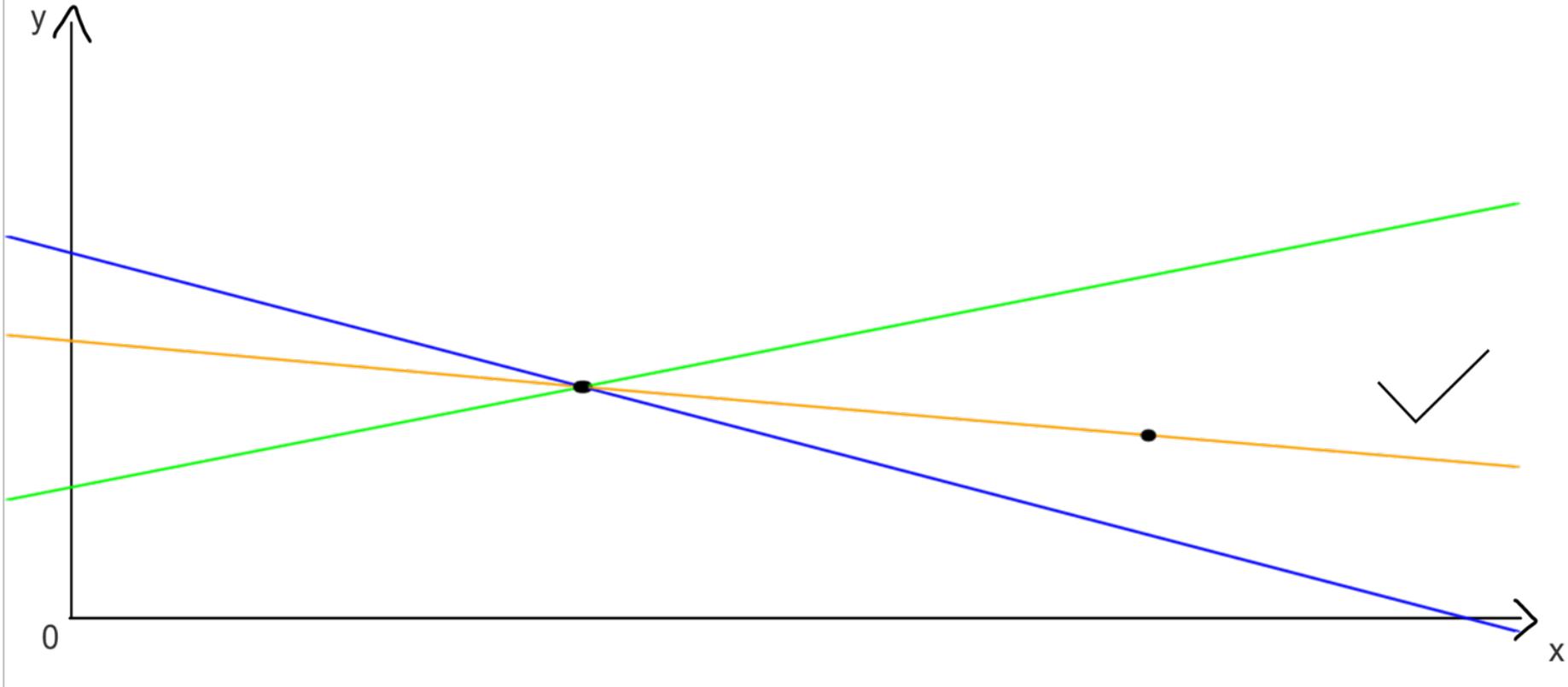


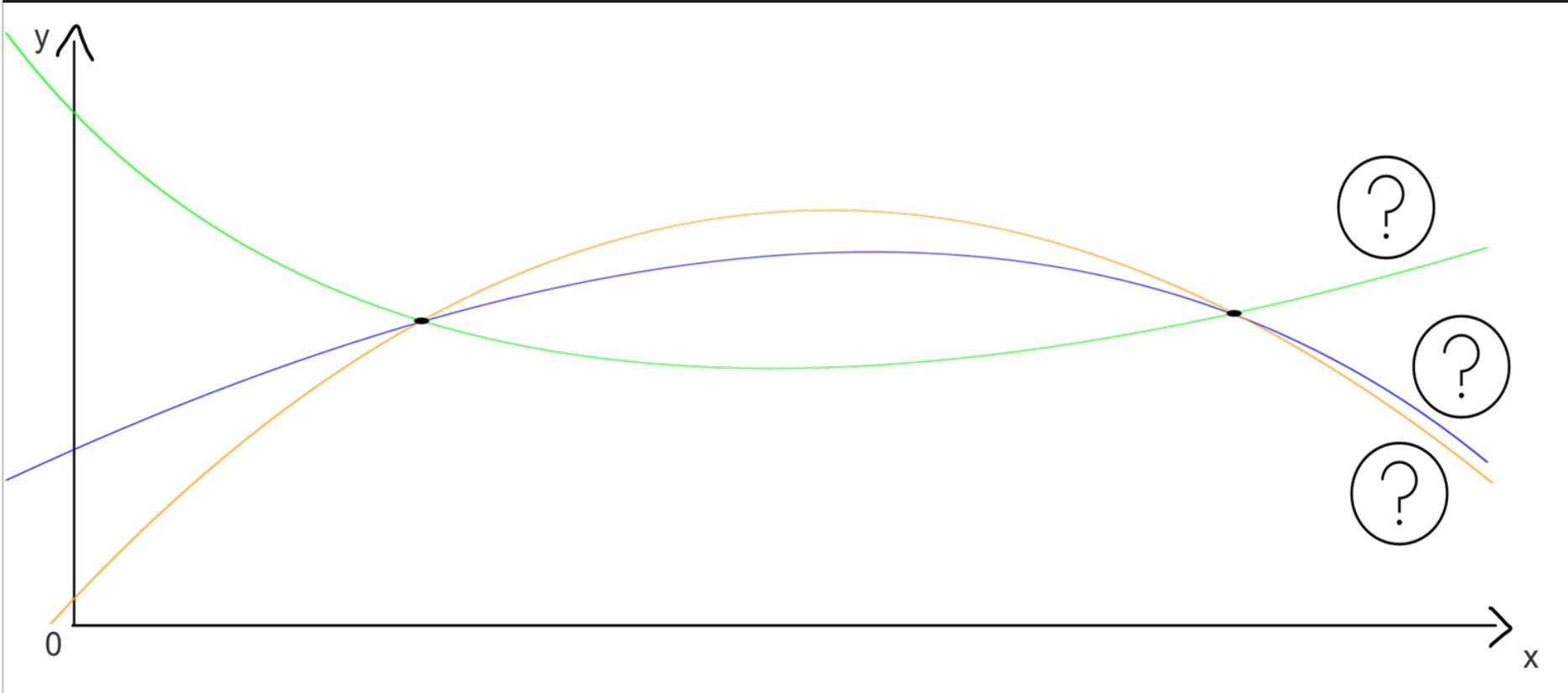


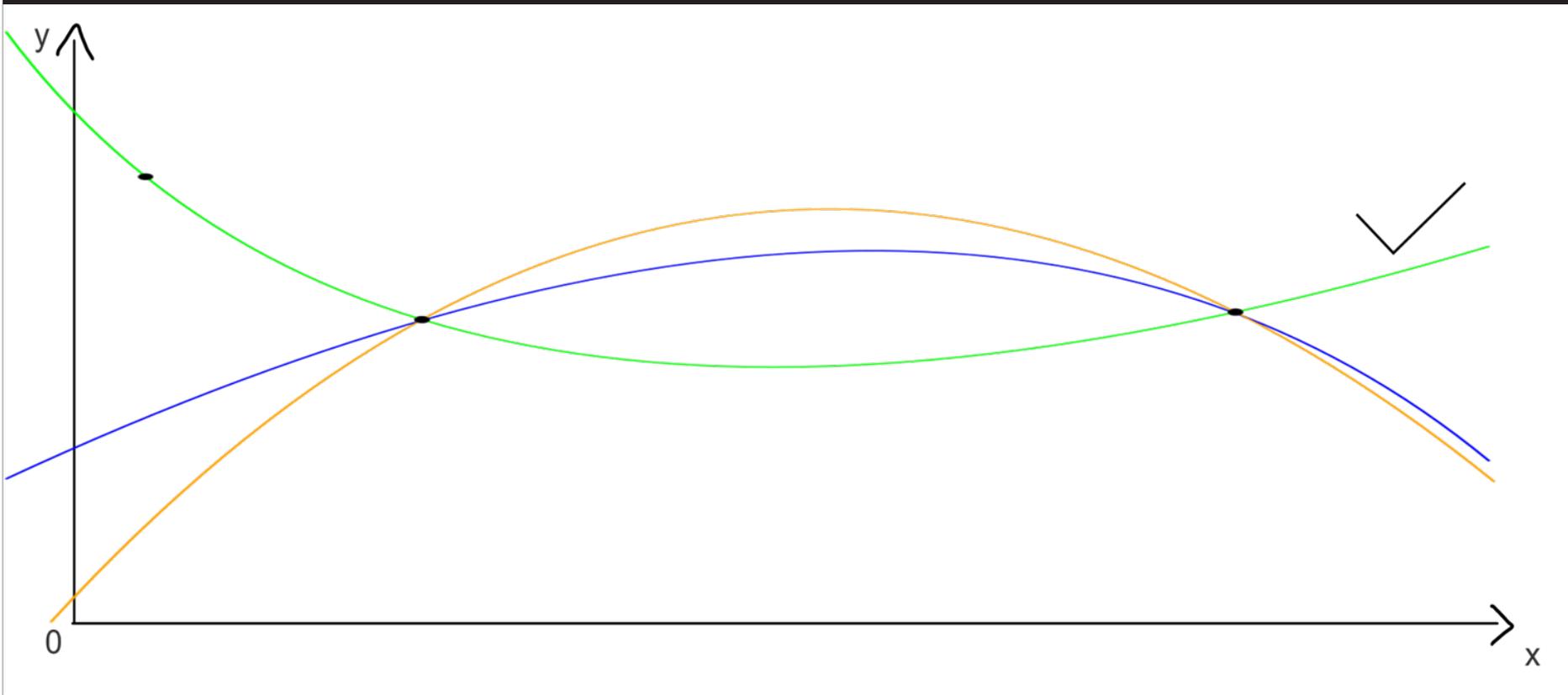


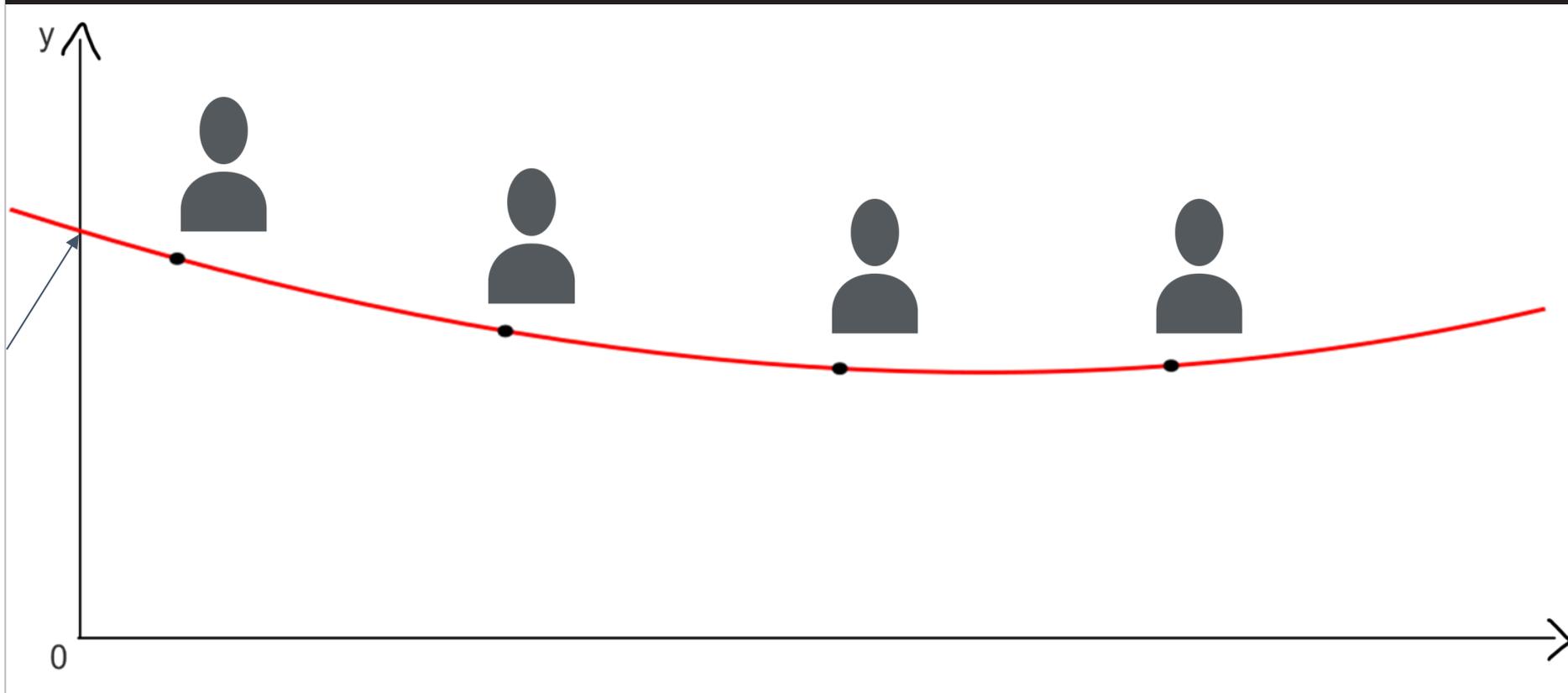
1. Notions de cryptographie
2. Propriétés de notre protocole
3. Applications
- 4. Introduction au partage de secret**











- Chiffrement à clé distribuée post-quantique (sans tier de confiance)
- Chiffrement à clé distribuée dans le modèle standard (sans tier de confiance)
- Preuve formelle de notre chiffrement dans un modèle plus fort

- F. L. Mouël, M. Godon, R. Brien, E. Beurier, N. Boulahia-Cuppens, and F. Cuppens, “Trustless distributed symmetric-key encryption,” 2024. [Online]. Available: <https://arxiv.org/abs/2408.16137>
- A. Shamir, “How to share a secret,” *Communications of the ACM*, vol. 22, no. 11, pp. 612–613, 1979.
- S. Agrawal, P. Mohassel, P. Mukherjee, and P. Rindal, “Dis-e: distributed symmetric-key encryption,” in *Proceedings of the 2018 ACM SIGSAC Conference on Computer and Communications Security*, 2018, pp. 1993–2010.
- S. Agrawal, W. Dai, A. Luykx, P. Mukherjee, and P. Rindal, “Paradise: efficient threshold authenticated encryption in fully malicious model,” in *International Conference on Cryptology in India*. Springer, 2022, pp. 26–51.

