

# Encodeurs rotatif

**Microcontrôleurs pour la commande de systèmes mécaniques**

Pierre-Yves ROCHAT

- Marquer les positions angulaires

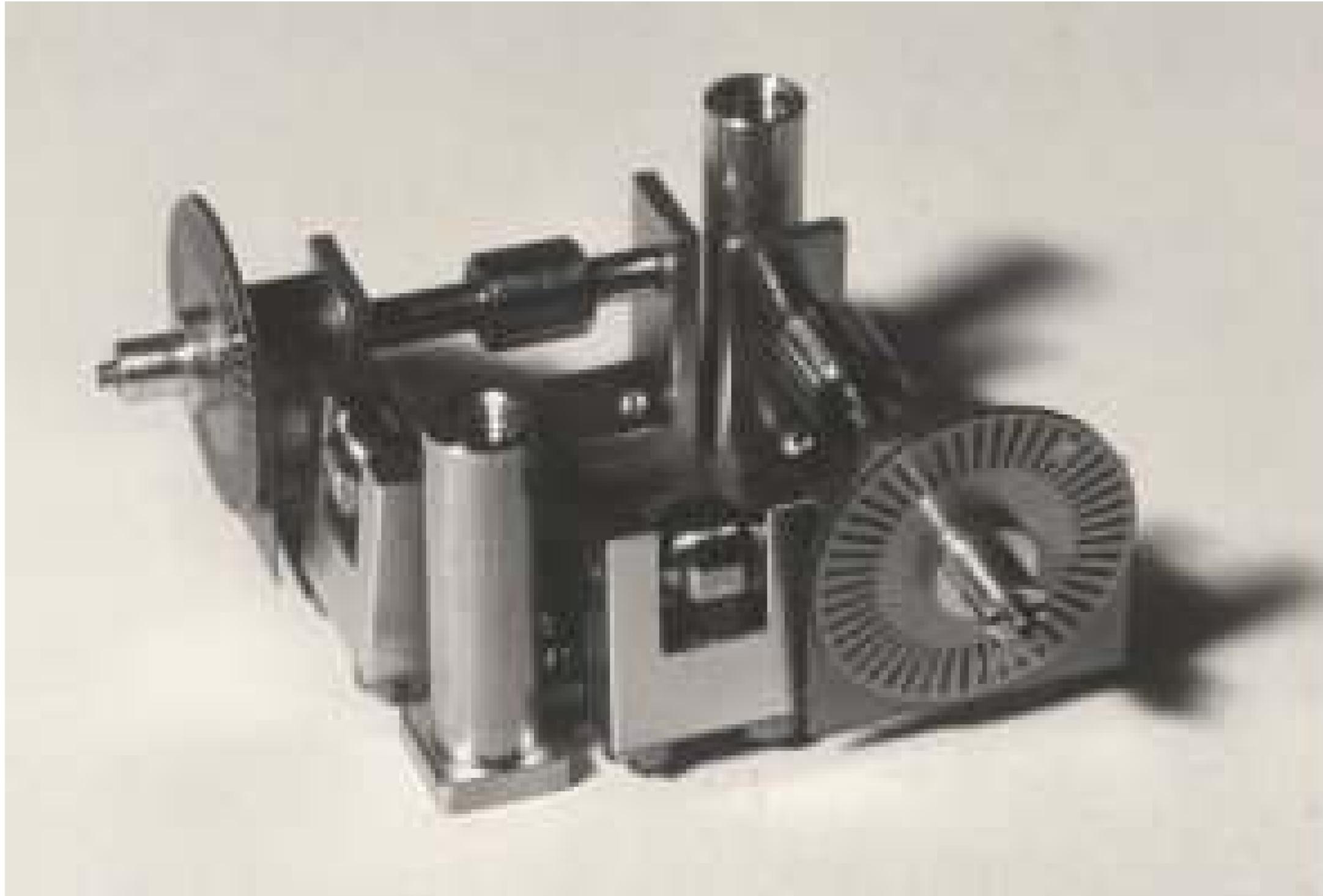
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- Placer un **capteur** :
  - > mesure rotation, vitesse

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- Placer un **capteur** :  
-> mesure rotation, vitesse
- Placers **deux capteurs** :  
+ mesure du sens

# Mécanique d'une souris 1980...

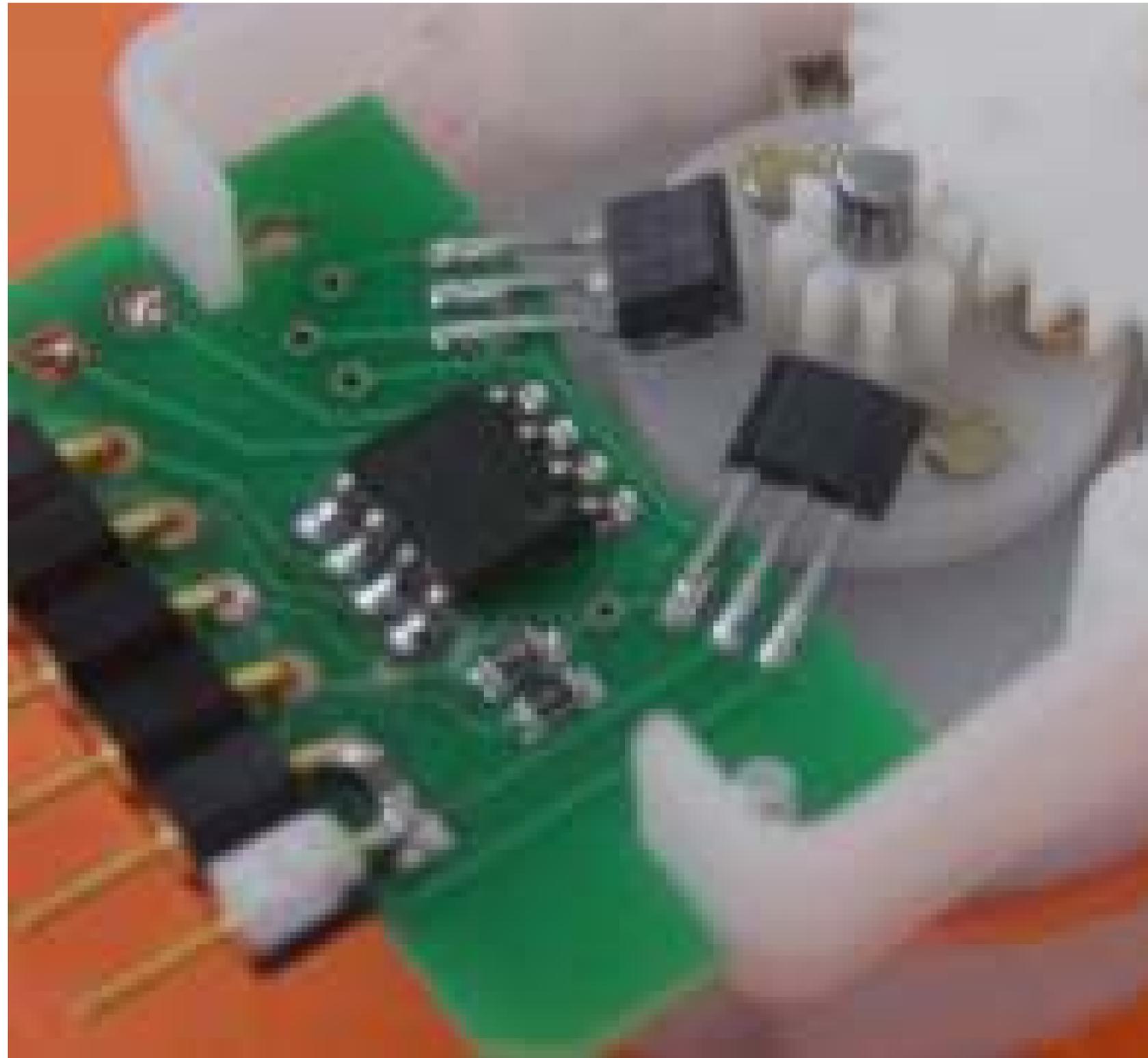


*Un modèle est exposé  
en INF119  
(notre salle de TP...)*

# Encodeurs optiques industriels

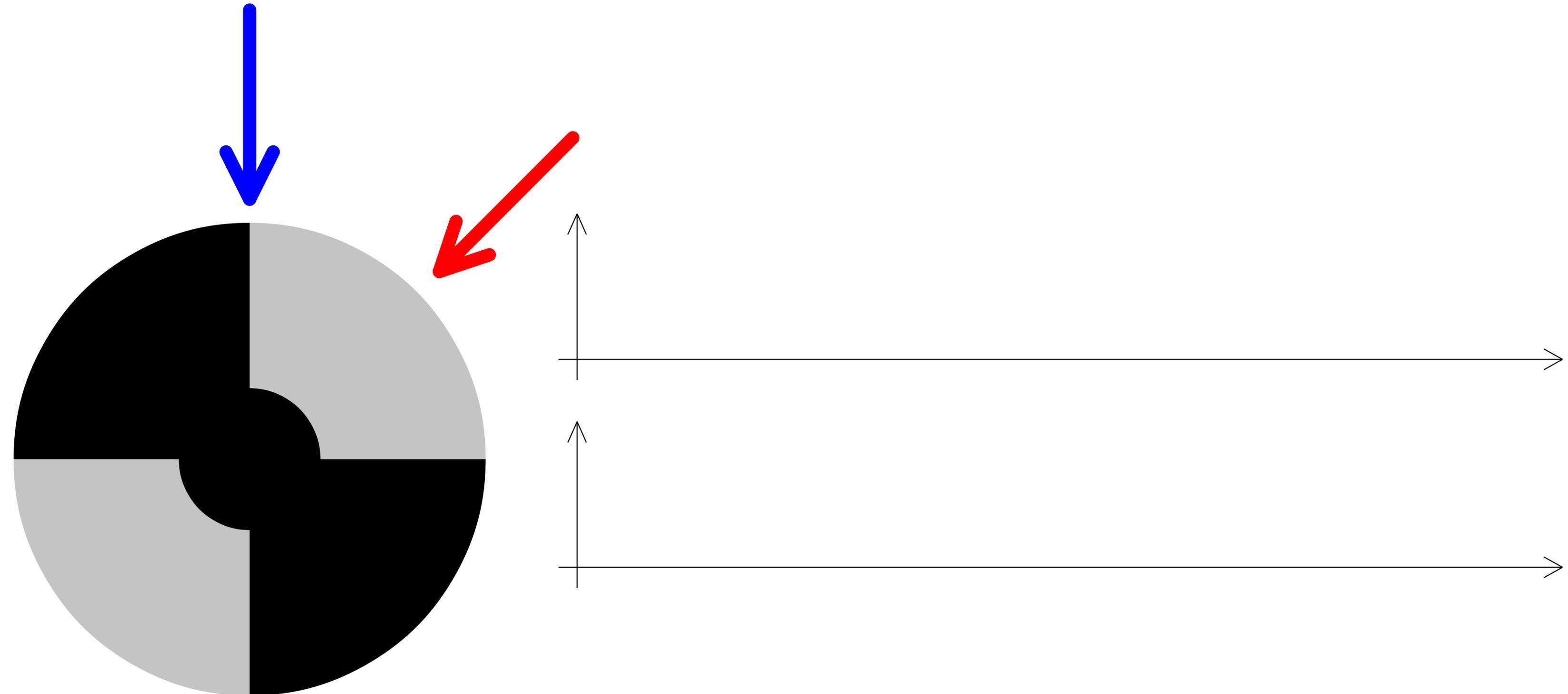


# Capteurs magnétiques

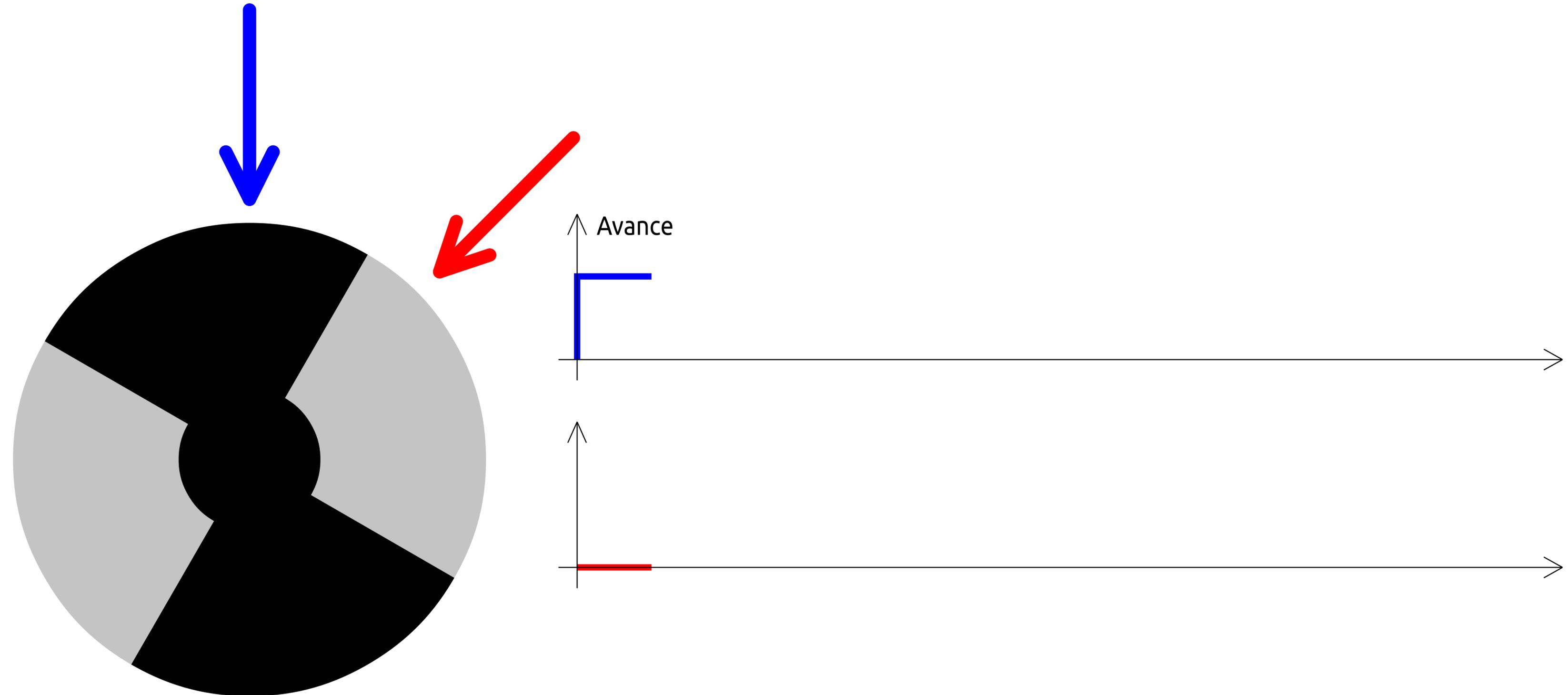


*Moteur de robot  
avec capteurs  
magnétique (effet Hall)  
utilisé sur un robot  
pour ce cours  
il y a quelques années...*

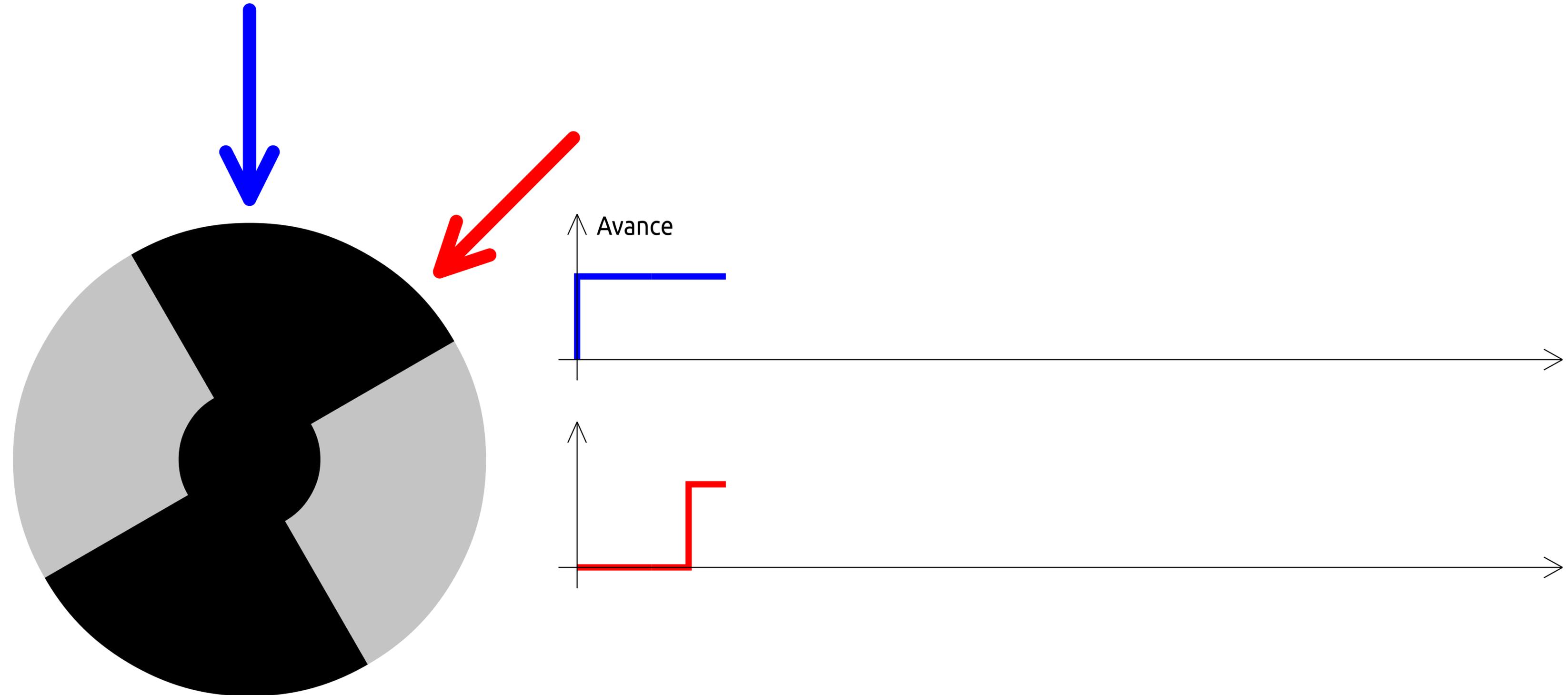
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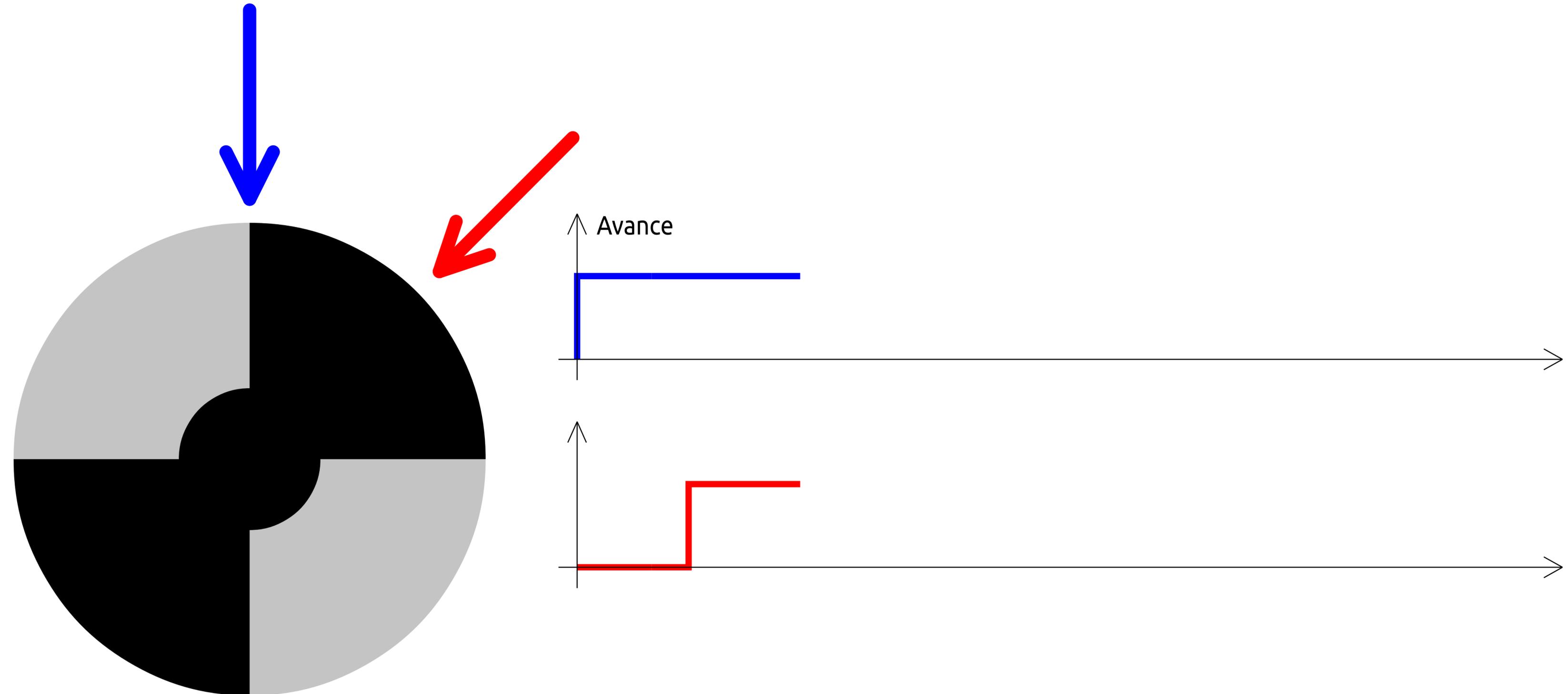
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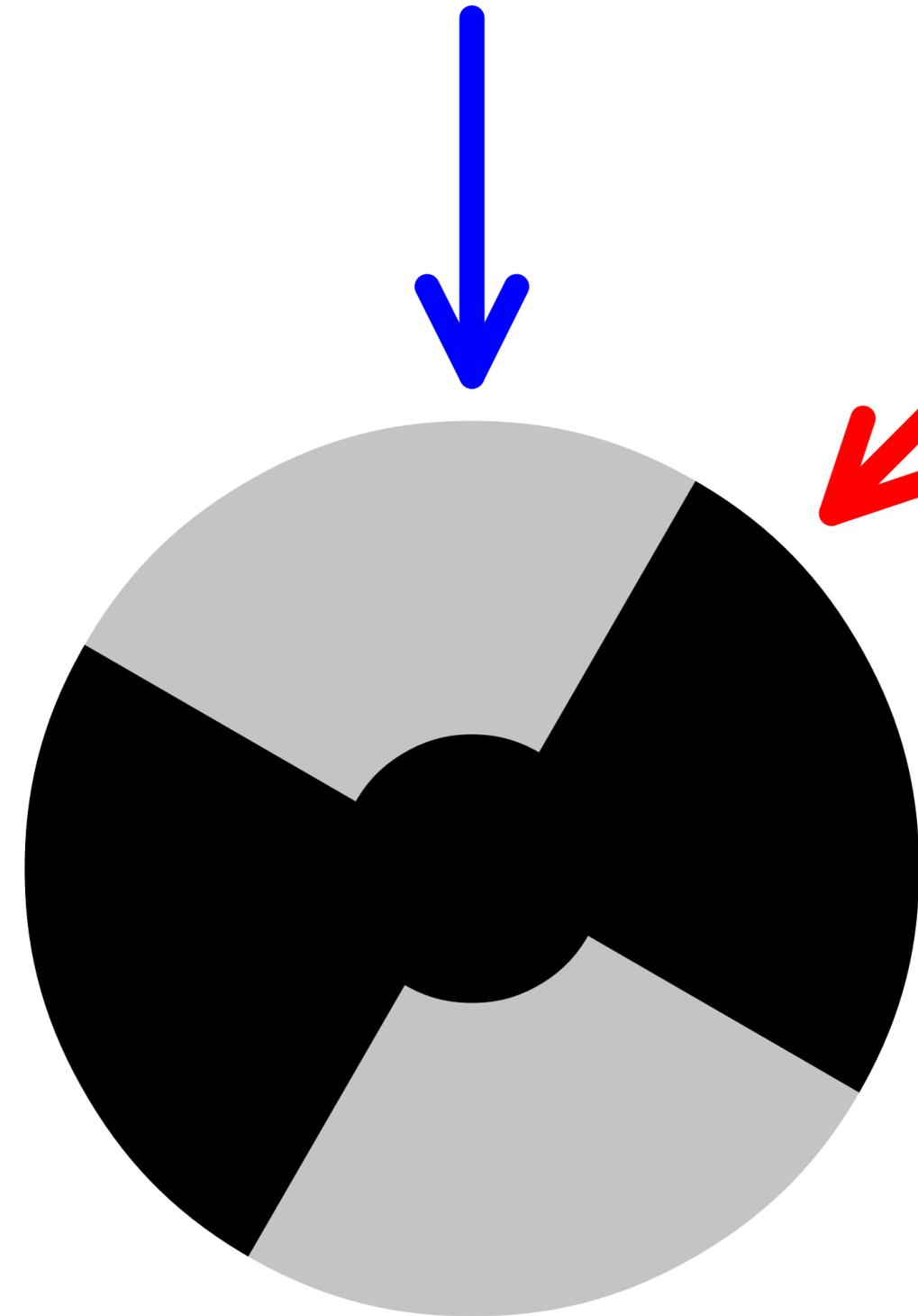
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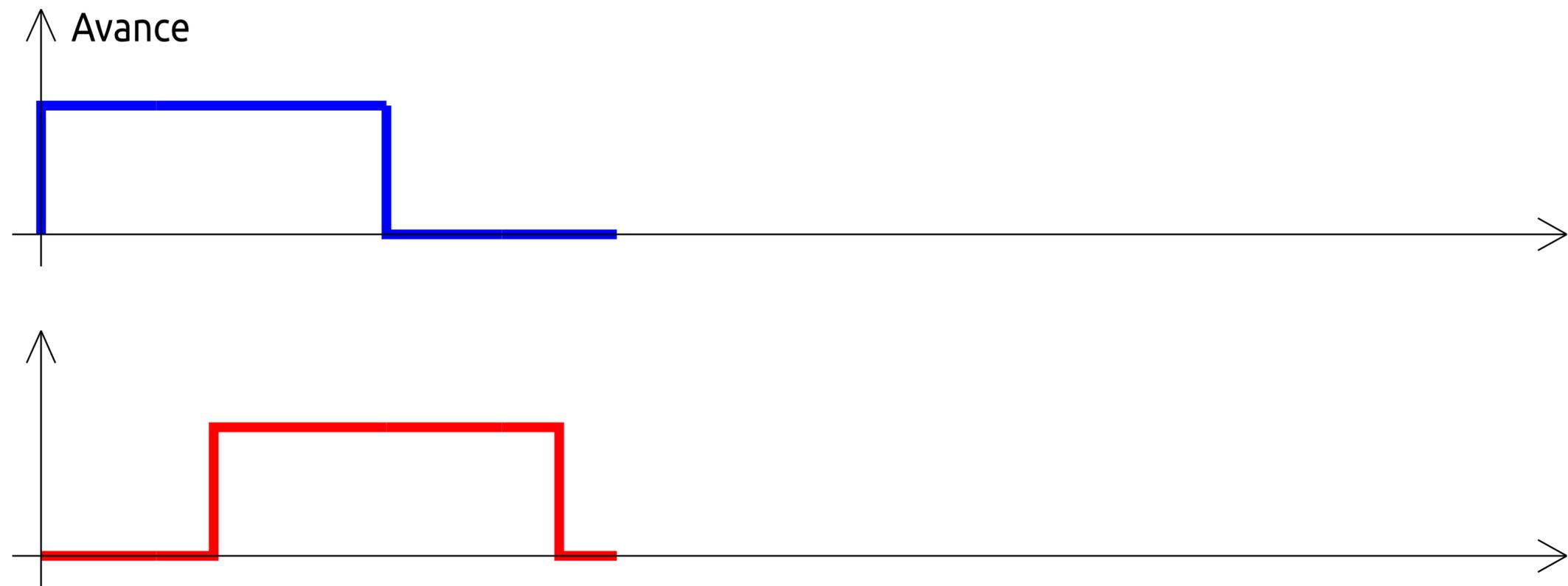
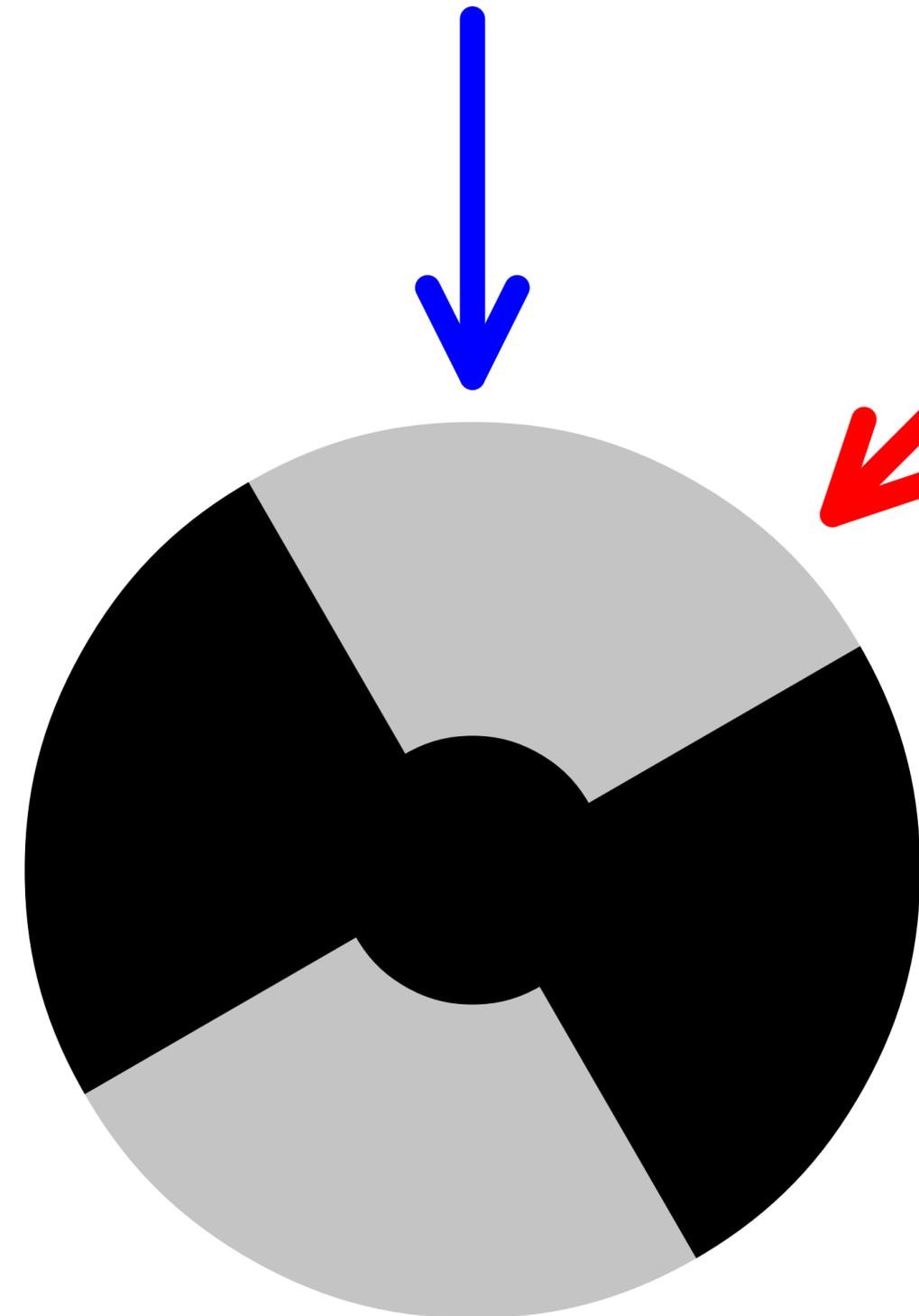
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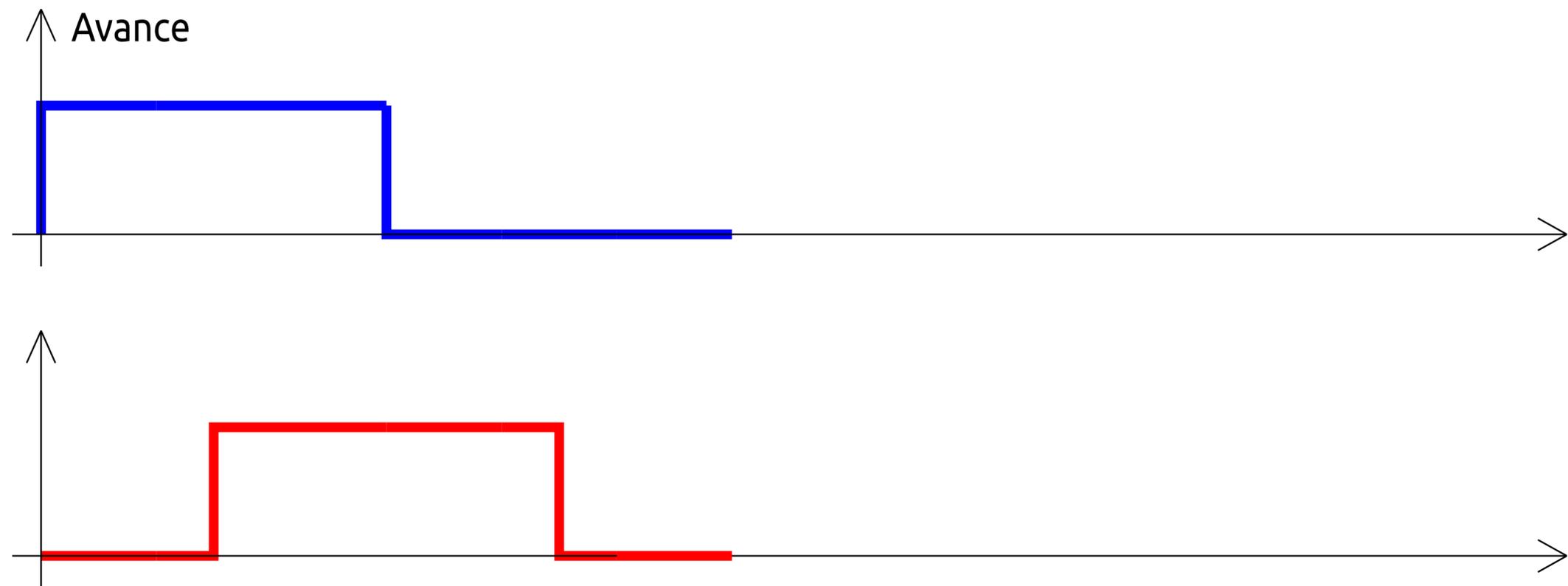
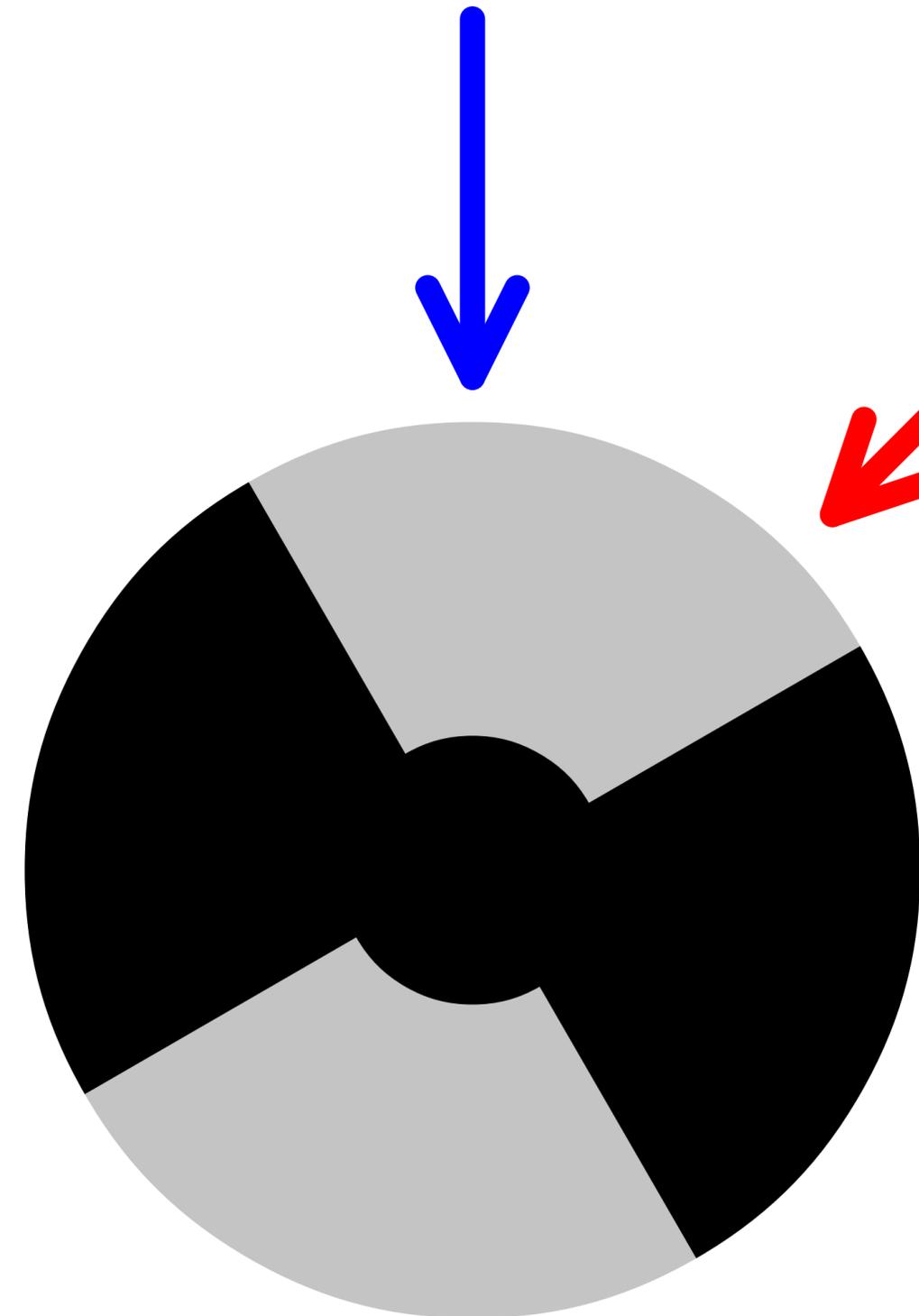
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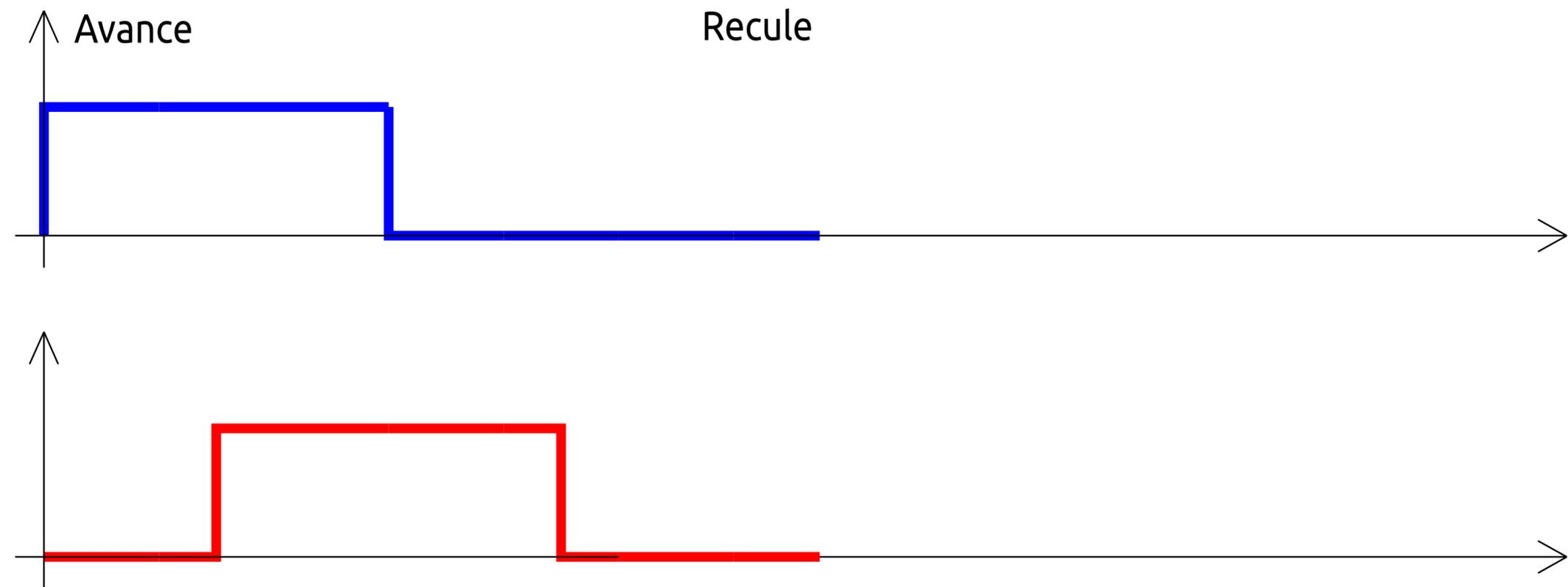
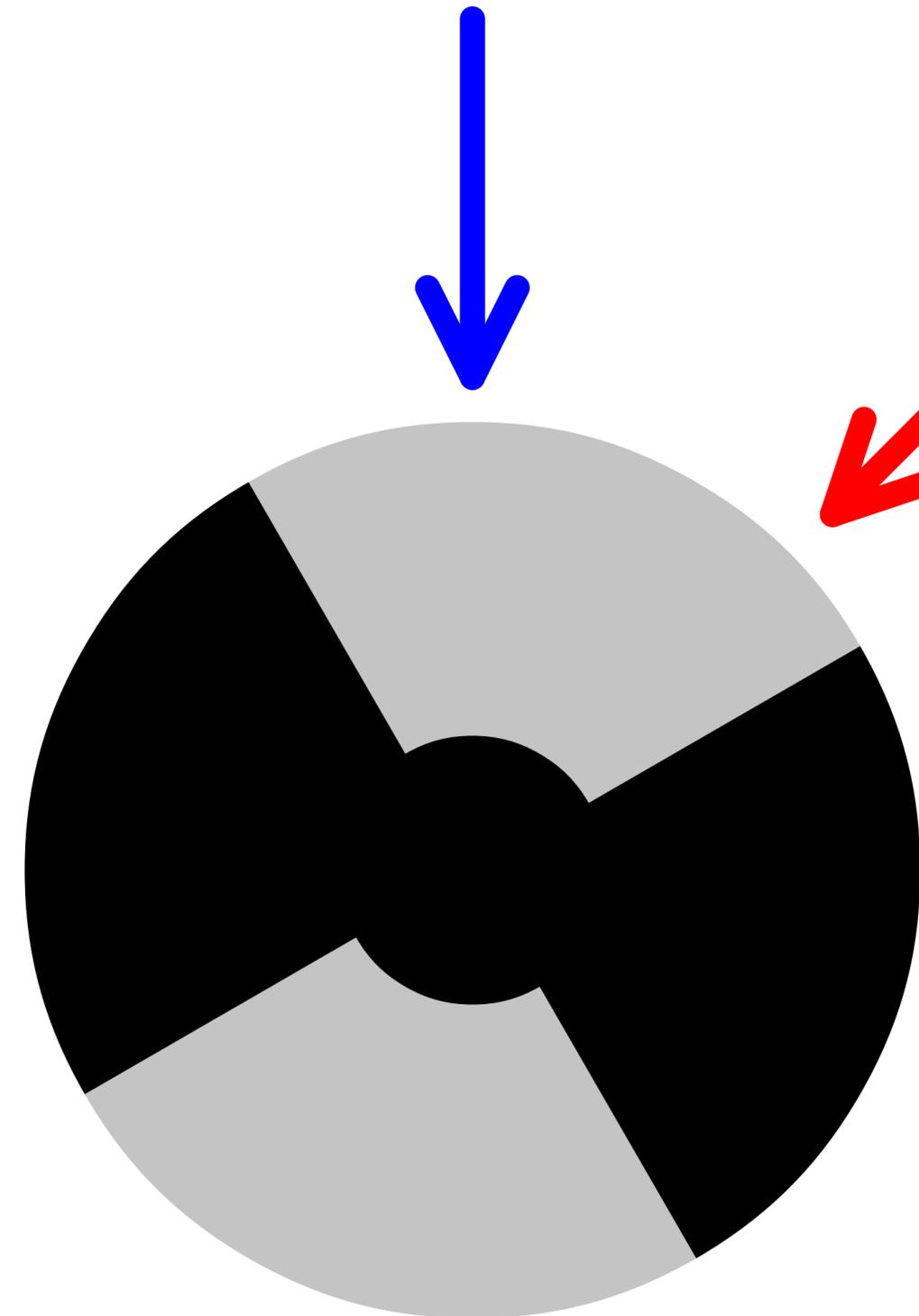
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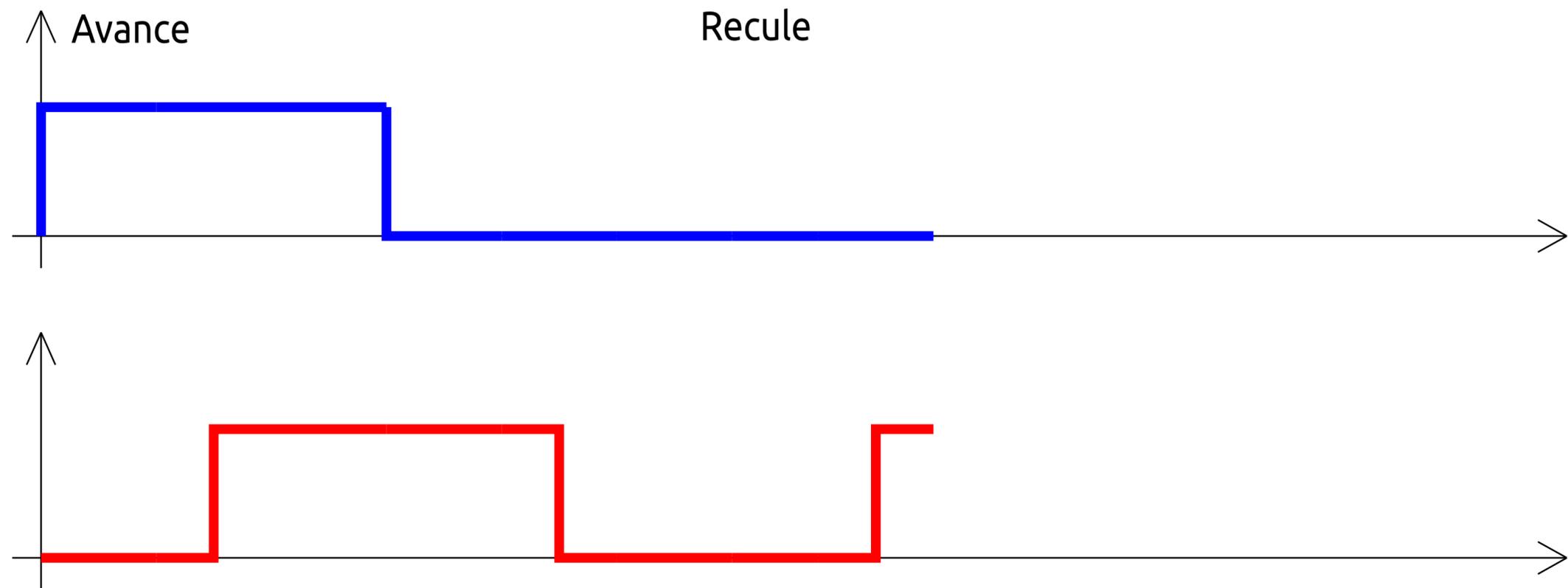
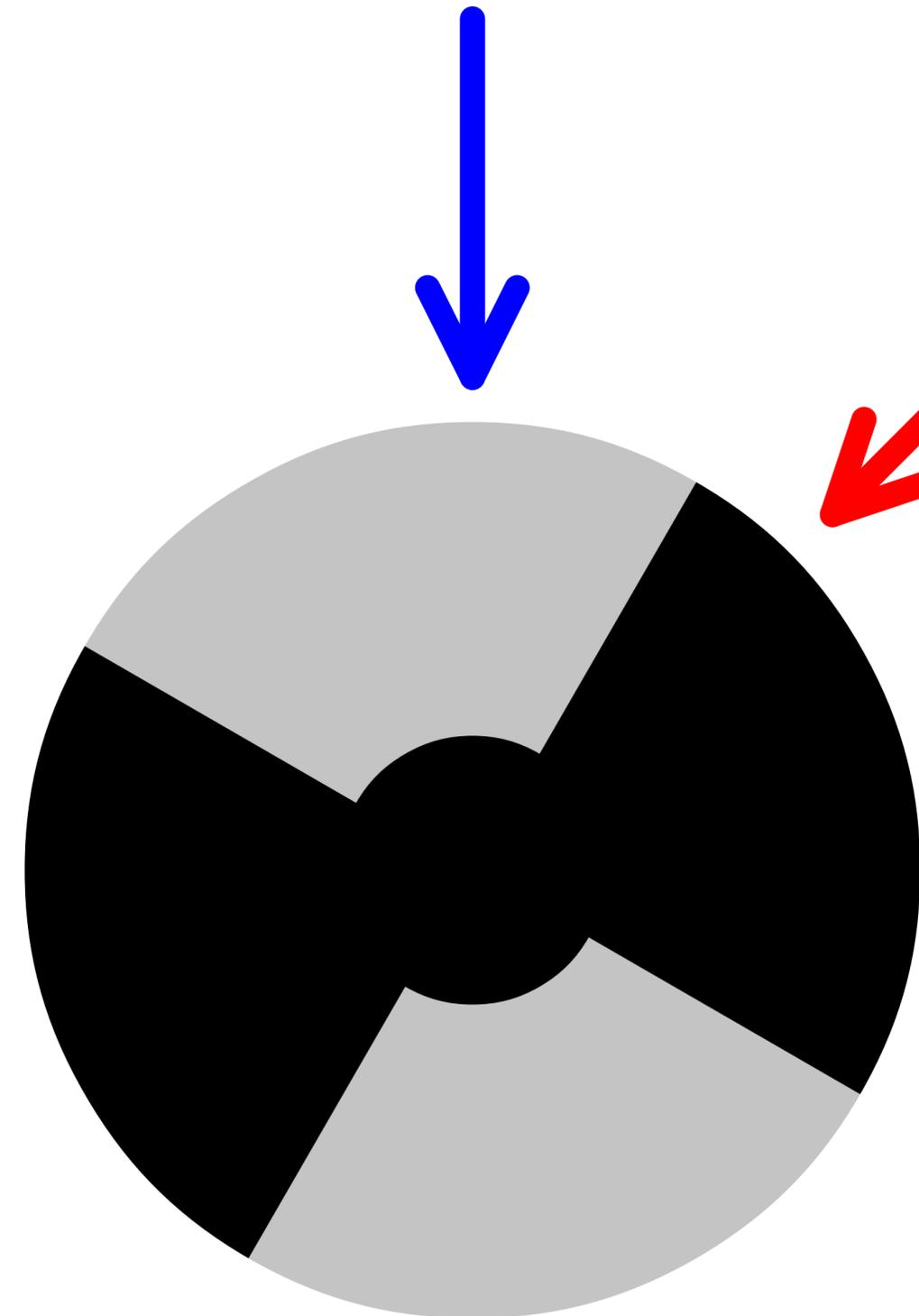
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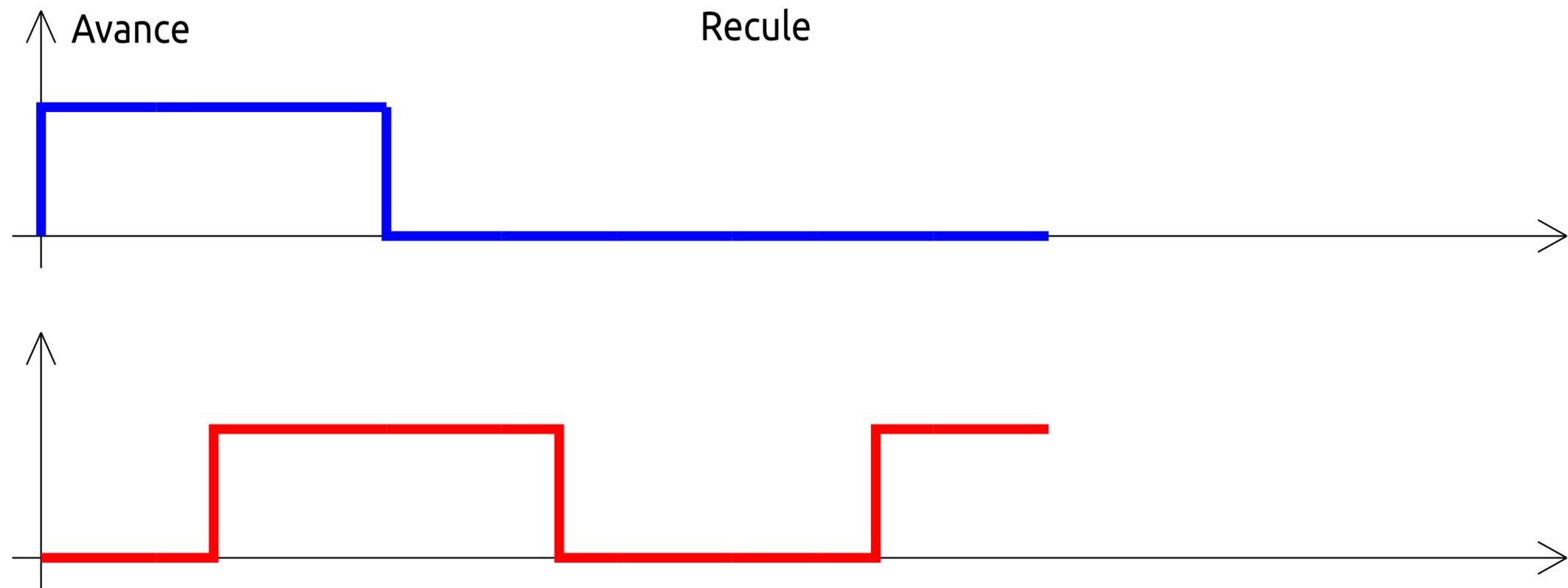
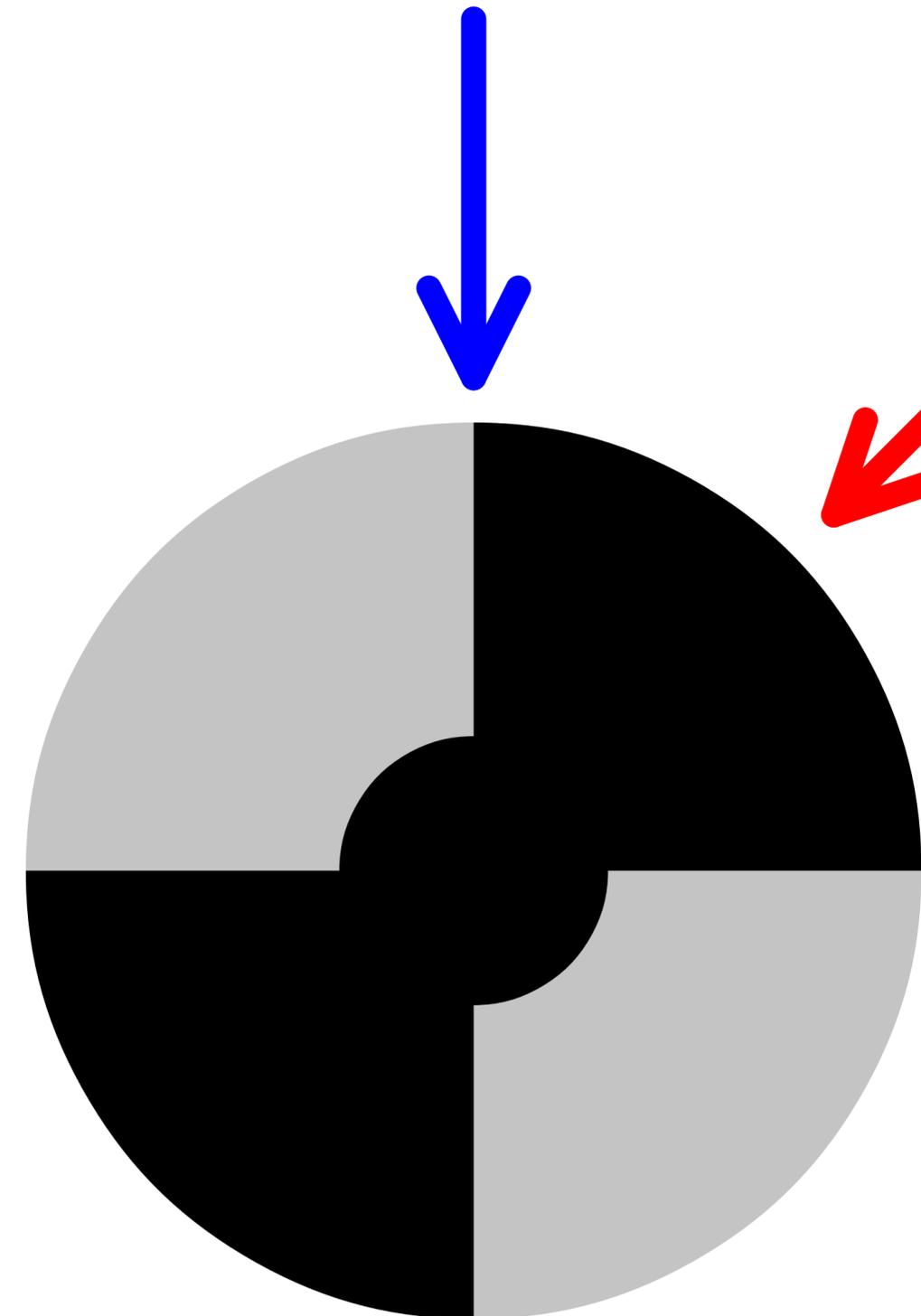
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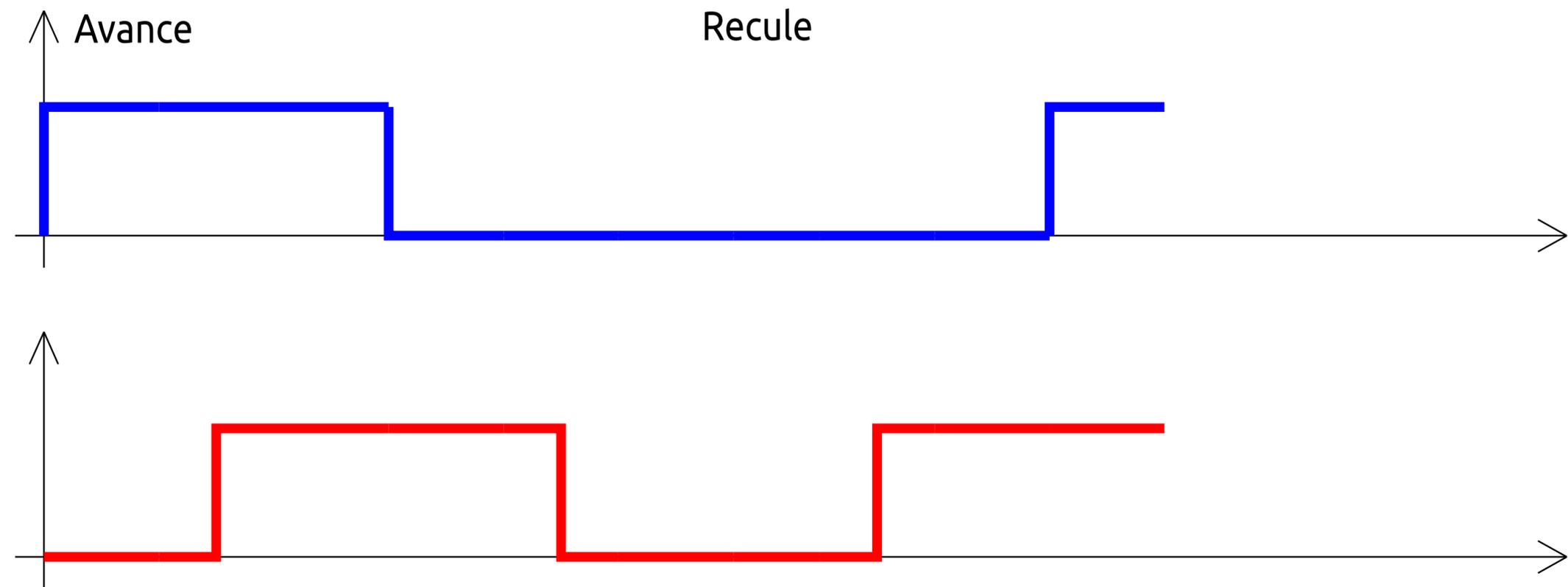
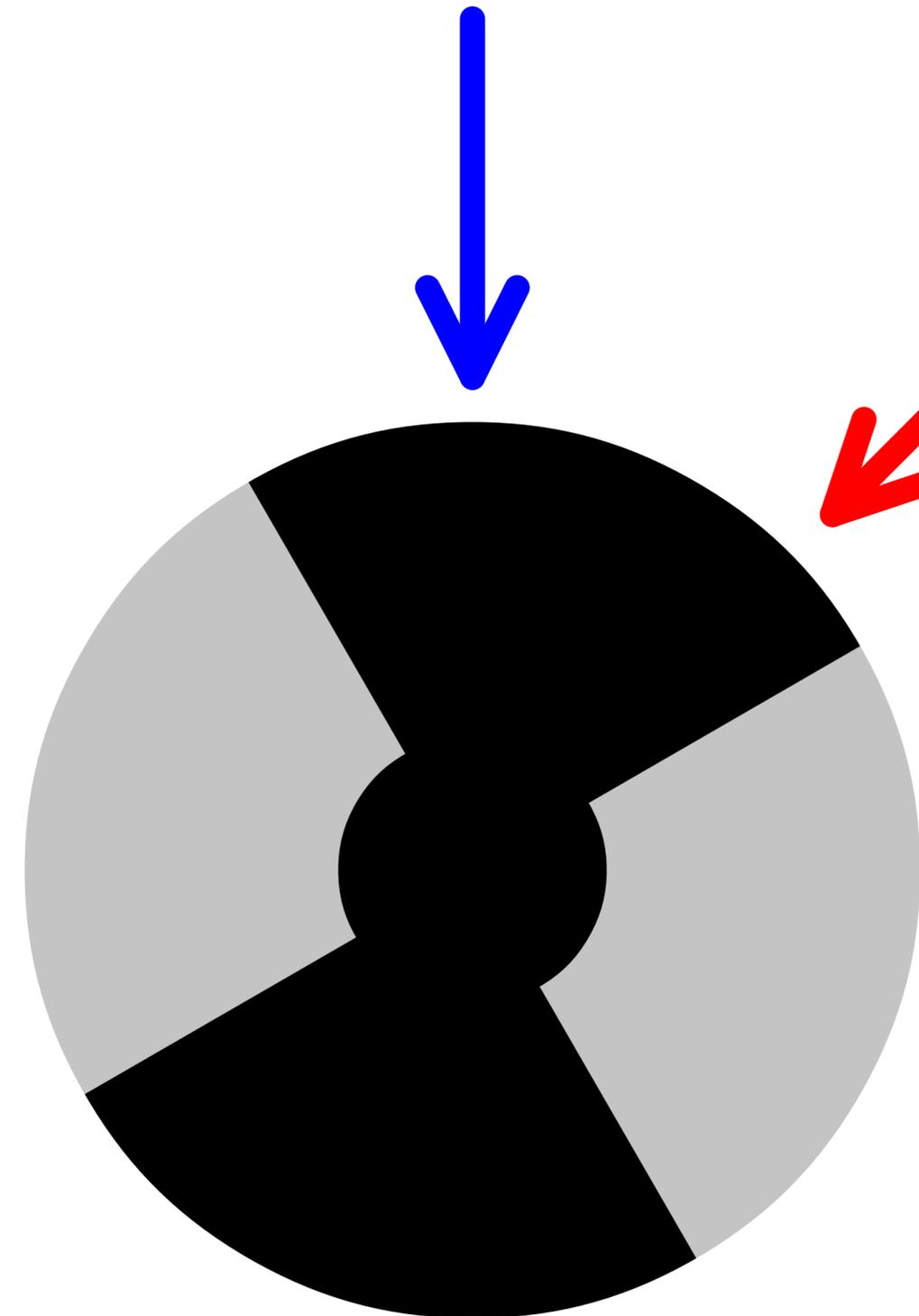
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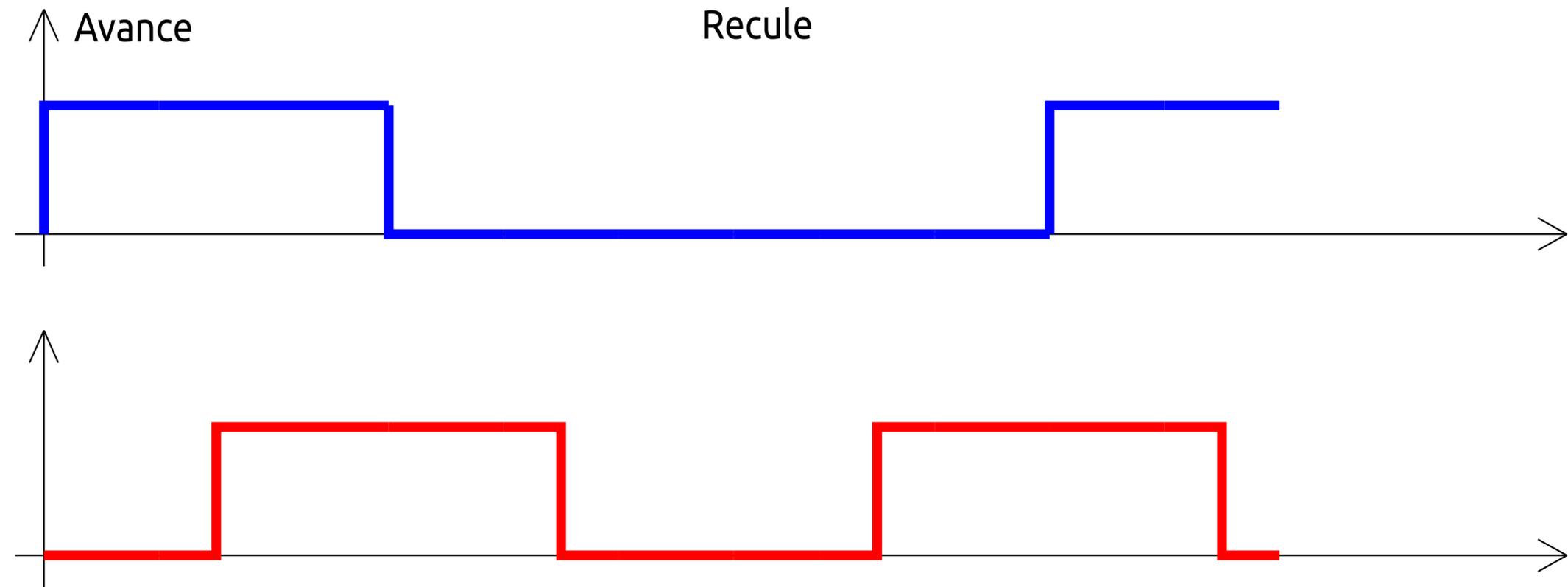
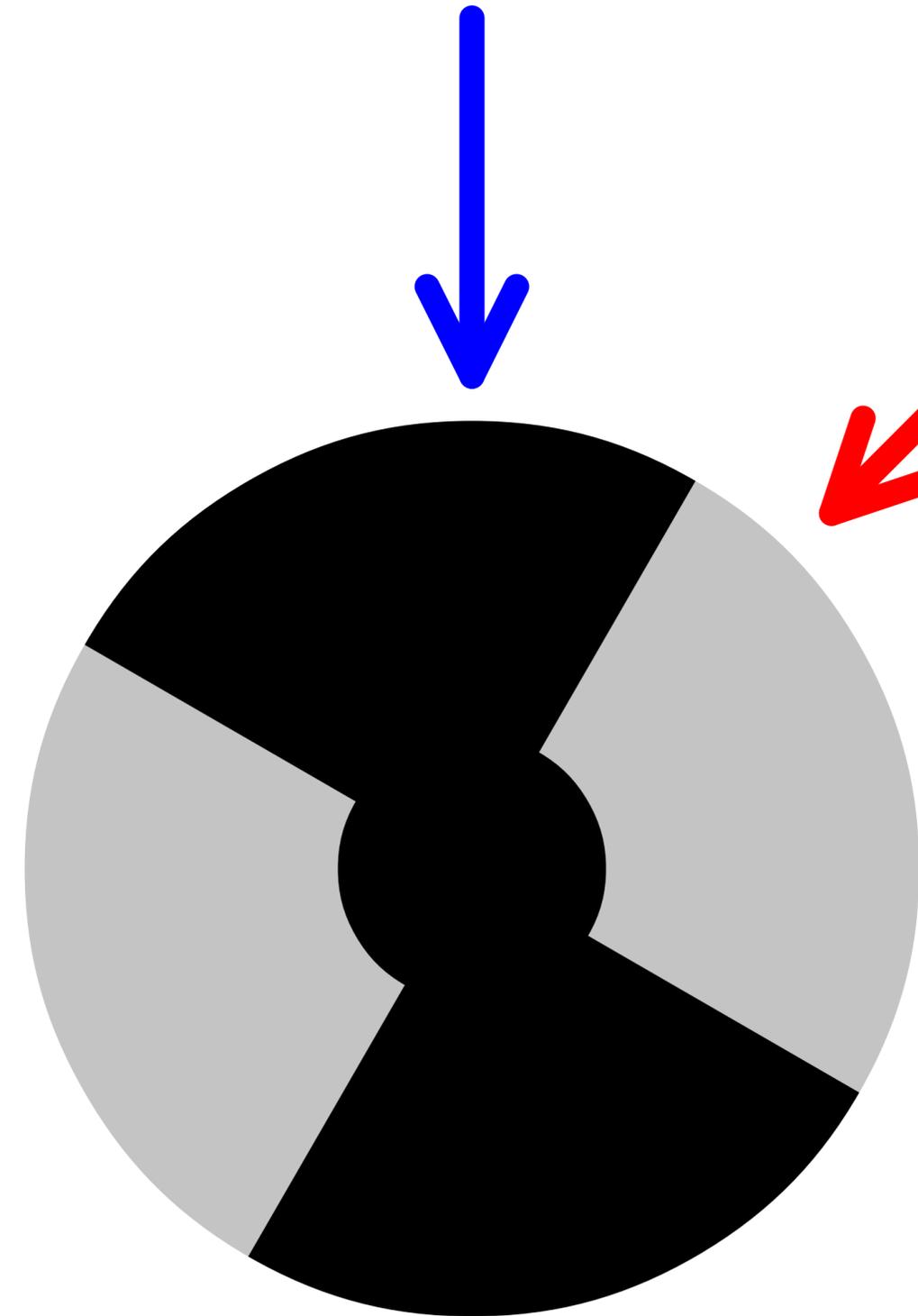
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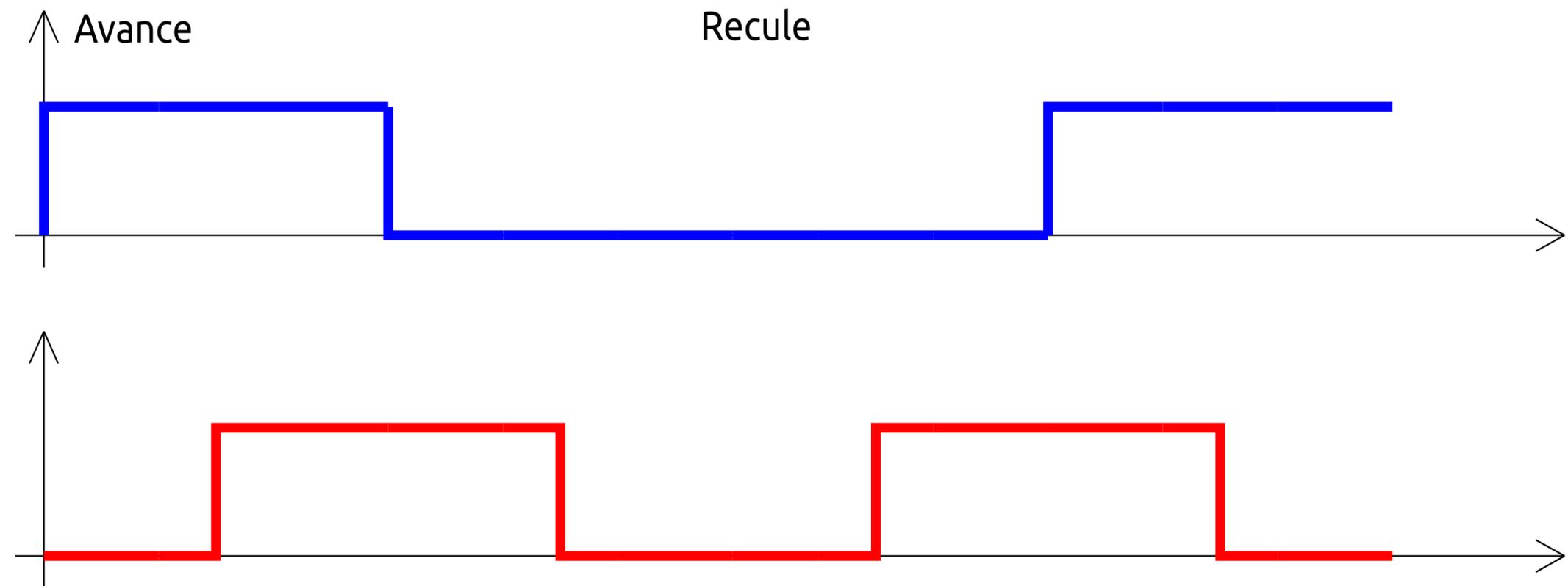
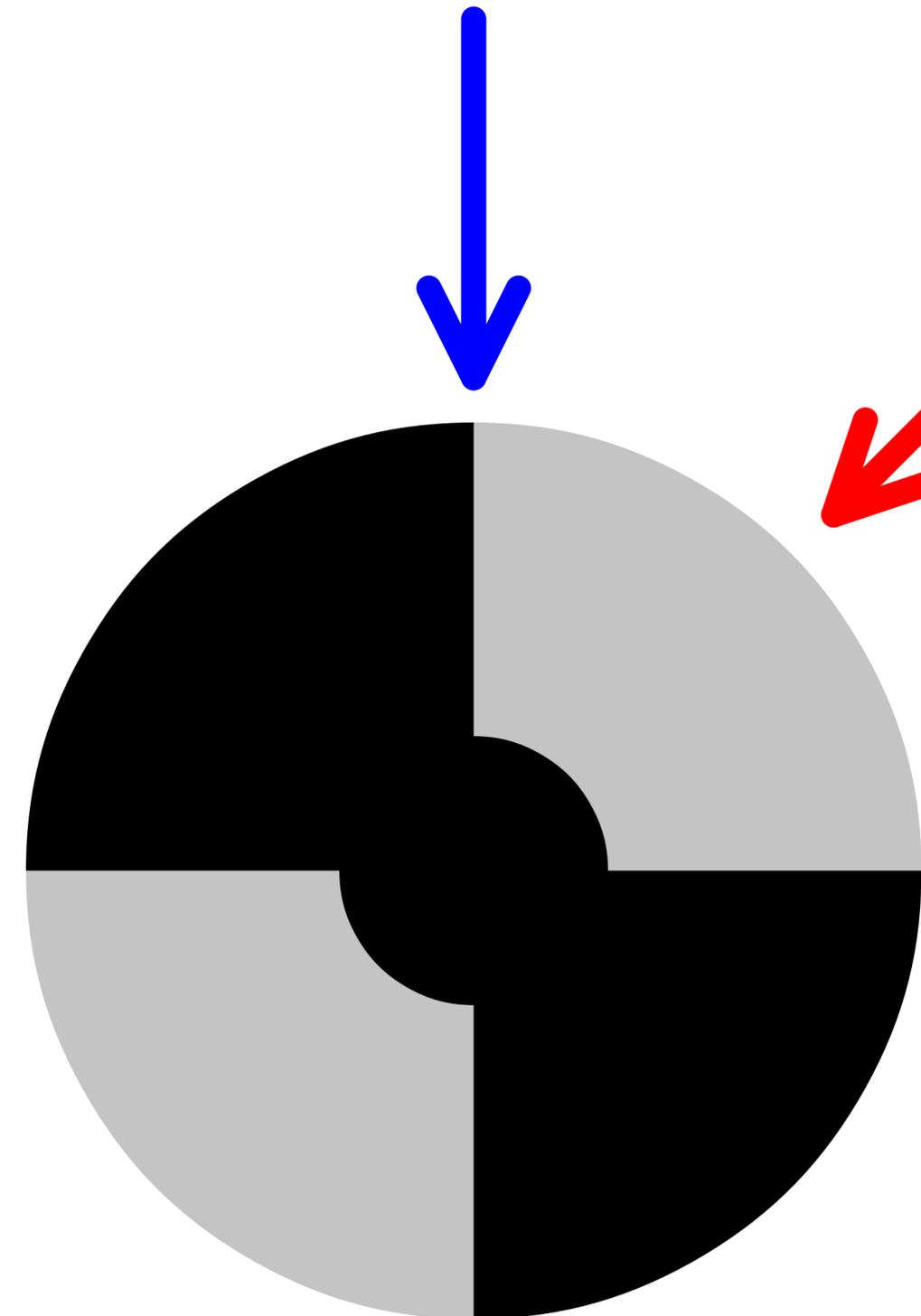
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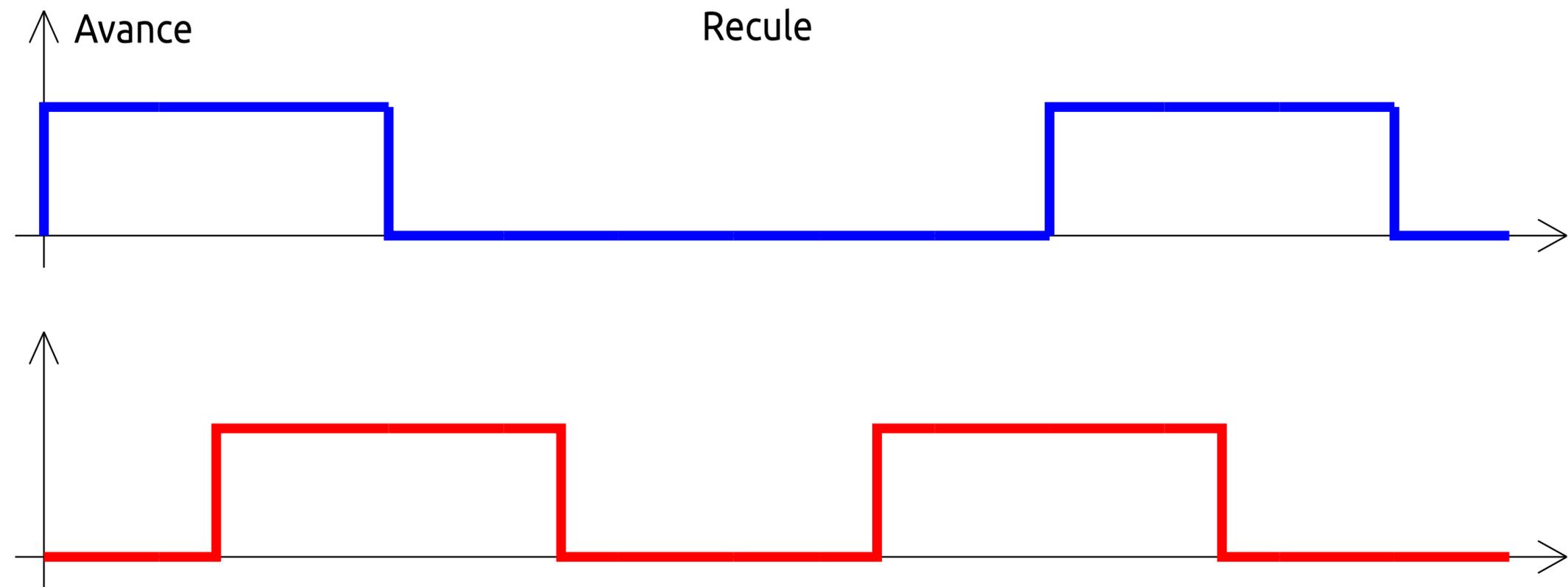
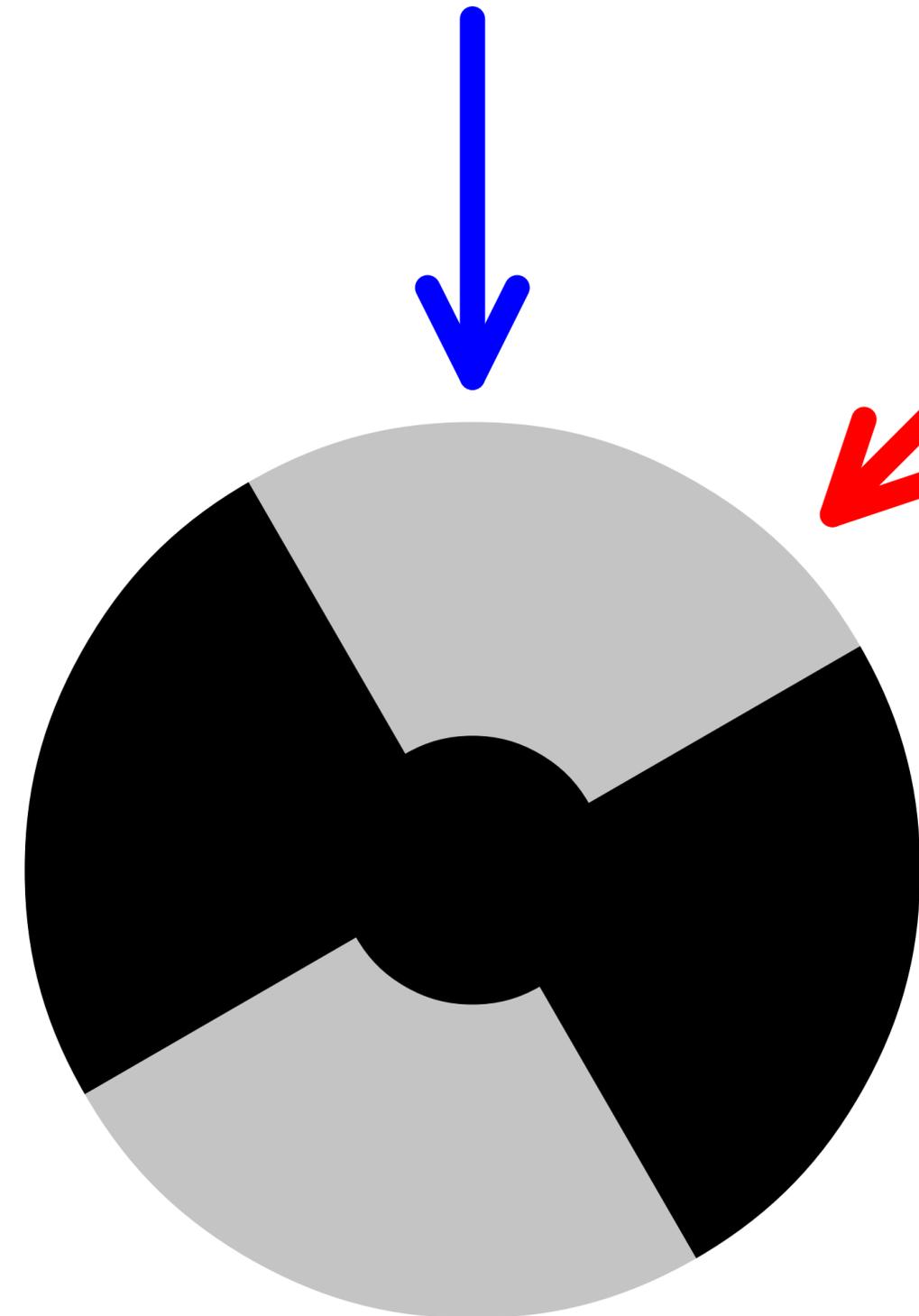
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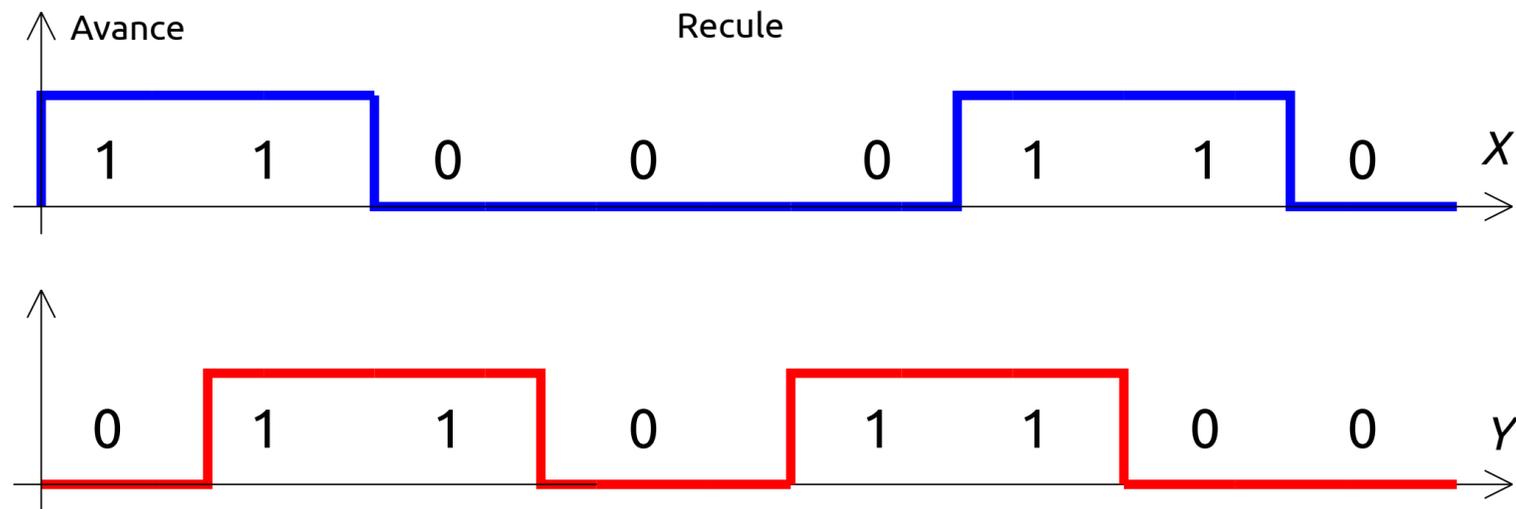
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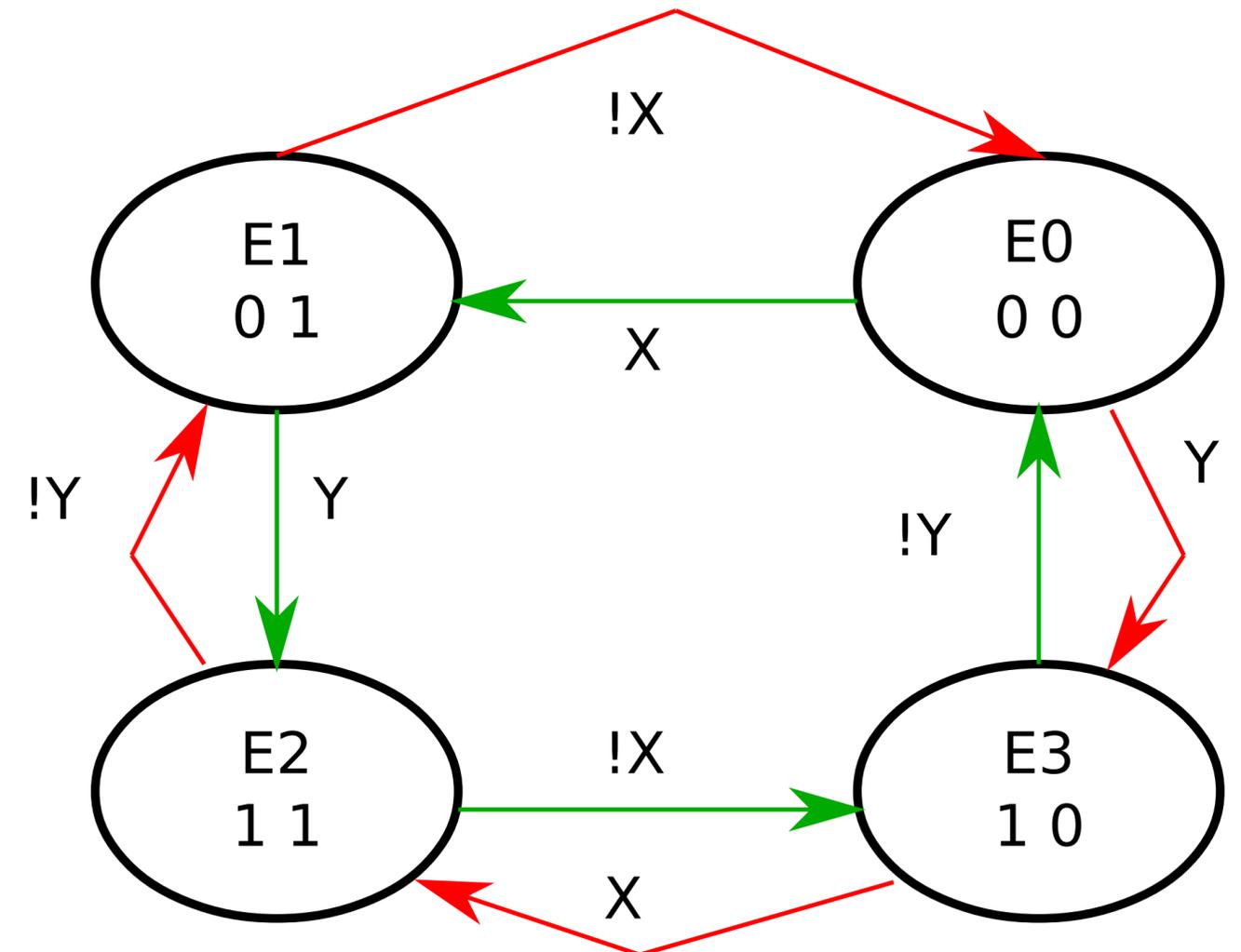
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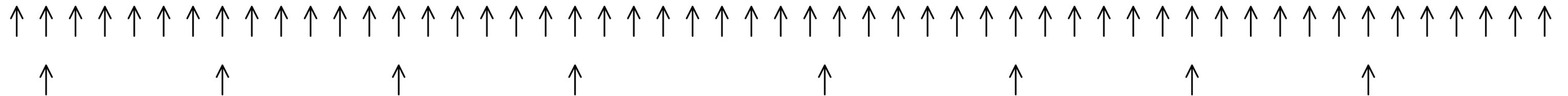
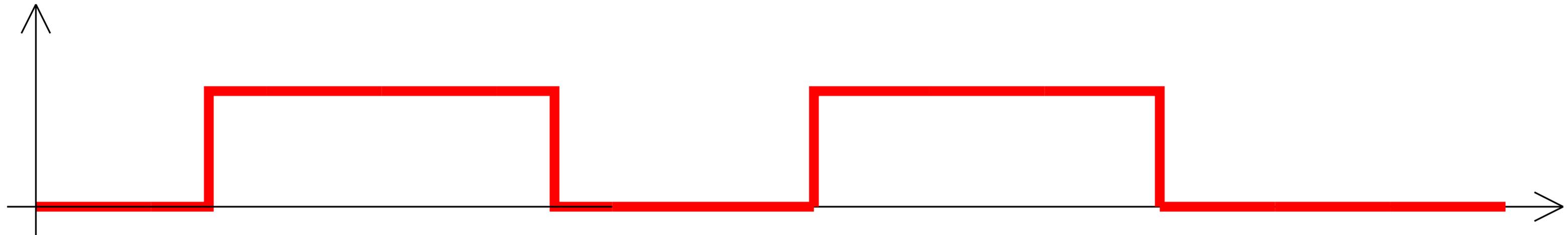
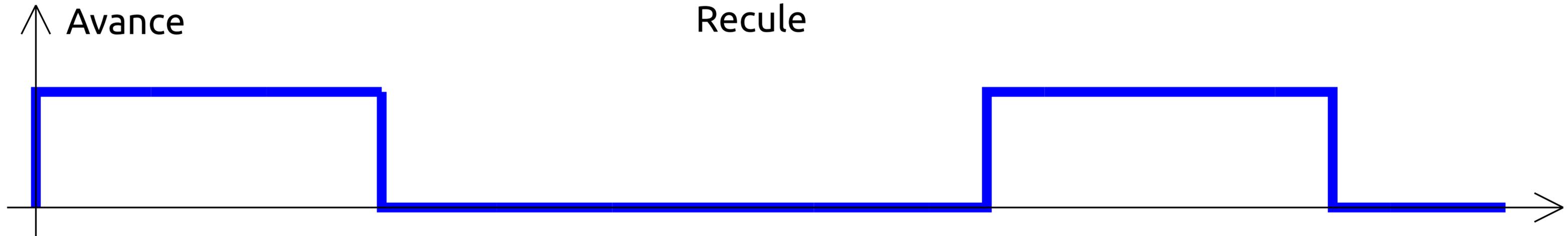
# Décodage avec une machine d'état



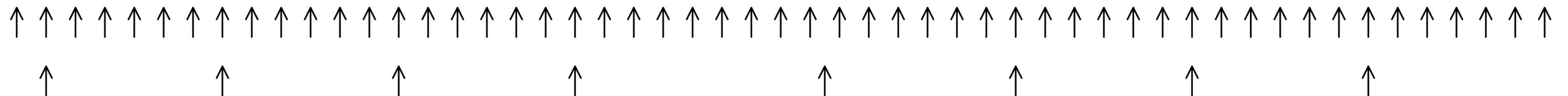
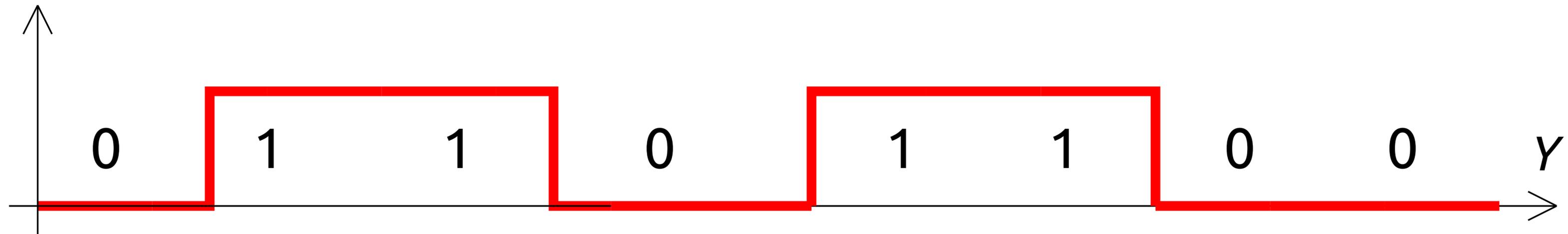
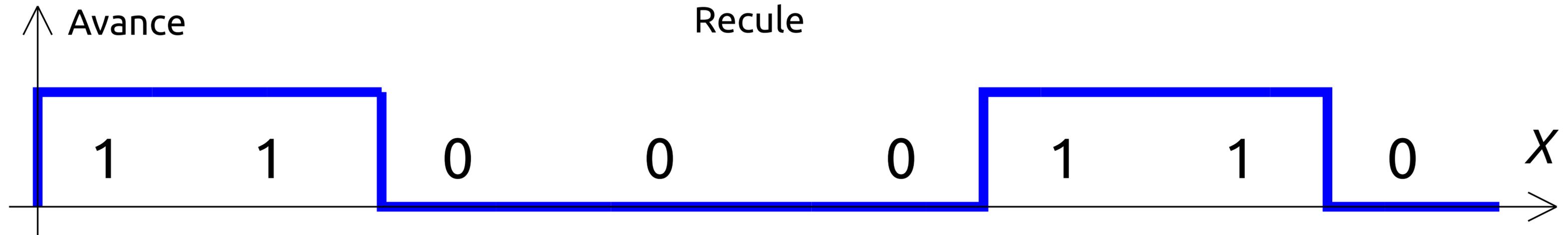
- 4 combinaisons de X et Y
- 1 état pour chaque combinaison
- Le système n'a pas de sortie
- Chaque transition modifie la variable de position



# Autre algorithme



# Algorithme : repérer les changements





# Algorithme : comparer ancien X et Y

