

# Sudoku « Animaux »

Ce document contient :

- cette page de présentation ;
- en page suivante, un exemple de résolution d'une grille ;
- un bloc de 42 grilles à résoudre, classés par ordre de difficulté (au vu du temps mis et des démarches entreprises par les enfants) et la planche de jetons correspondant ;
- les solutions, sur les trois dernières pages.

Ce document propose une nouvelle version des sudoku, sous la forme des grille imagées  $4 \times 4$  plus particulièrement destinées et adaptées à des enfants du cycle 1 et du début du cycle 2.

Les grilles et les jetons pourront être collés sur du carton fin, plastifiés puis découpés.

Conception : Arnaud Gazagnes

## Règles du jeu

La grille de jeu est un carré de 4 cases de côté, subdivisé en 4 carrés identiques (« régions »).

Les pions représentent des animaux : éléphant, ours, poisson et souris.

Certains pions sont déjà placés ; il reste à l'enfant de placer les autres en sachant que :

- dans chacune des quatre lignes, il y a quatre animaux différents ;
- dans chacune des quatre colonnes, il y a quatre animaux différents ;
- dans chacune des quatre régions, il y a quatre animaux différents.

Le maître pourra créer d'autres grilles à l'aide des seules douze grilles de base suivantes (on supposera que les animaux sont dessinés « en buste ») :

1	2	3	4
3	4	1	2
4	1	2	3
2	3	4	1

1	2	3	4
3	4	1	2
4	3	2	1
2	1	4	3

1	2	3	4
3	4	1	2
2	3	4	1
4	1	2	3

1	2	3	4
3	4	1	2
2	1	4	3
4	3	2	1

1	2	3	4
4	3	1	2
3	4	2	1
2	1	4	3

1	2	3	4
4	3	1	2
2	1	4	3
4	3	2	1

1	2	3	4
3	4	2	1
2	1	4	3
4	3	1	2

1	2	3	4
3	4	2	1
4	3	1	2
2	1	4	3

1	2	3	4
4	3	2	1
3	4	1	2
2	1	4	3

1	2	3	4
4	3	2	1
2	4	1	3
3	1	4	2

1	2	3	4
4	3	2	1
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4	3	2	1

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3	1	4	2
2	4	1	3

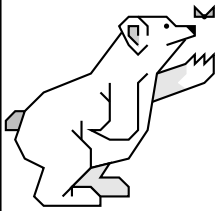
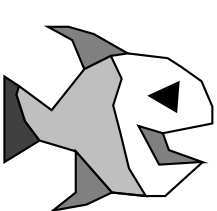
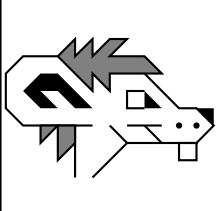
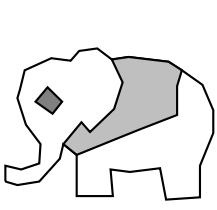
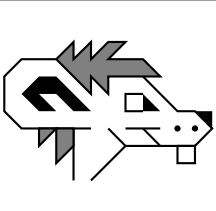
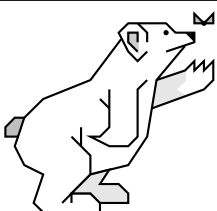
Pour un tableau donné, il y a  $4 \times 3 \times 2 \times 1 = 24$  permutations possibles.

Par exemple, on peut faire les associations « 1 = éléphant, 2 = ours, 3 = poisson et 4 = souris » ou encore « 1 = éléphant, 2 = poisson, 3 = souris et 4 = ours ».

Il existe donc  $12 \times 24 = 288$  grilles différentes.

La difficulté de résolution dépend du nombre de cases données, de leur disposition et de leur contenu !

## Un exemple de résolution

	A	B	C	D
1				
2				
3				
4				

Je dois avoir un éléphant dans le carré « en haut à gauche » : je place un éléphant en B2.

De même, je place un poisson en D4.

Je dois placer un ours dans le carré « en bas à gauche ». Mais je ne peux pas le placer dans la colonne A (à cause de l'ours en A1) ni dans la ligne 4 (à cause de l'ours en C4). Il me reste une seule possibilité : je place l'ours en B3.

De même, je place un ours en D2.

Je complète la ligne 3 en plaçant un poisson en A3.

Je complète la colonne A en plaçant un éléphant en A4.

Je complète le carré « en bas à gauche » en plaçant une souris en B4.

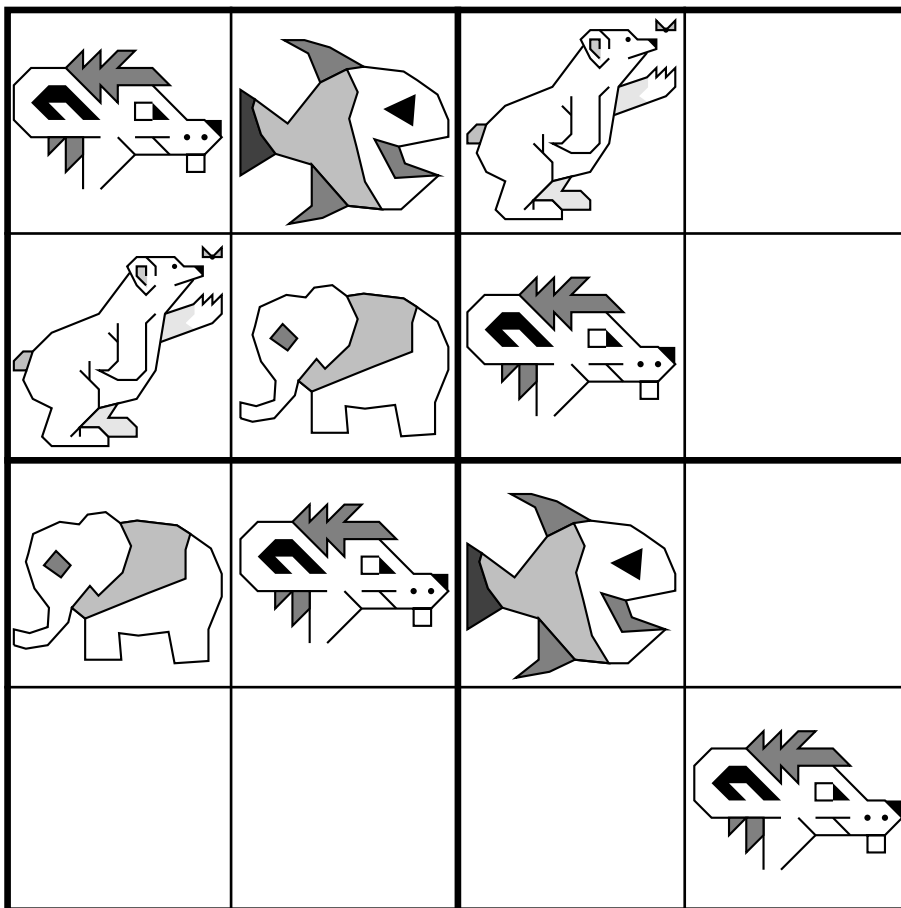
Je complète la colonne D en plaçant un éléphant en D1.

Je complète la ligne 1 en plaçant une souris en C1.

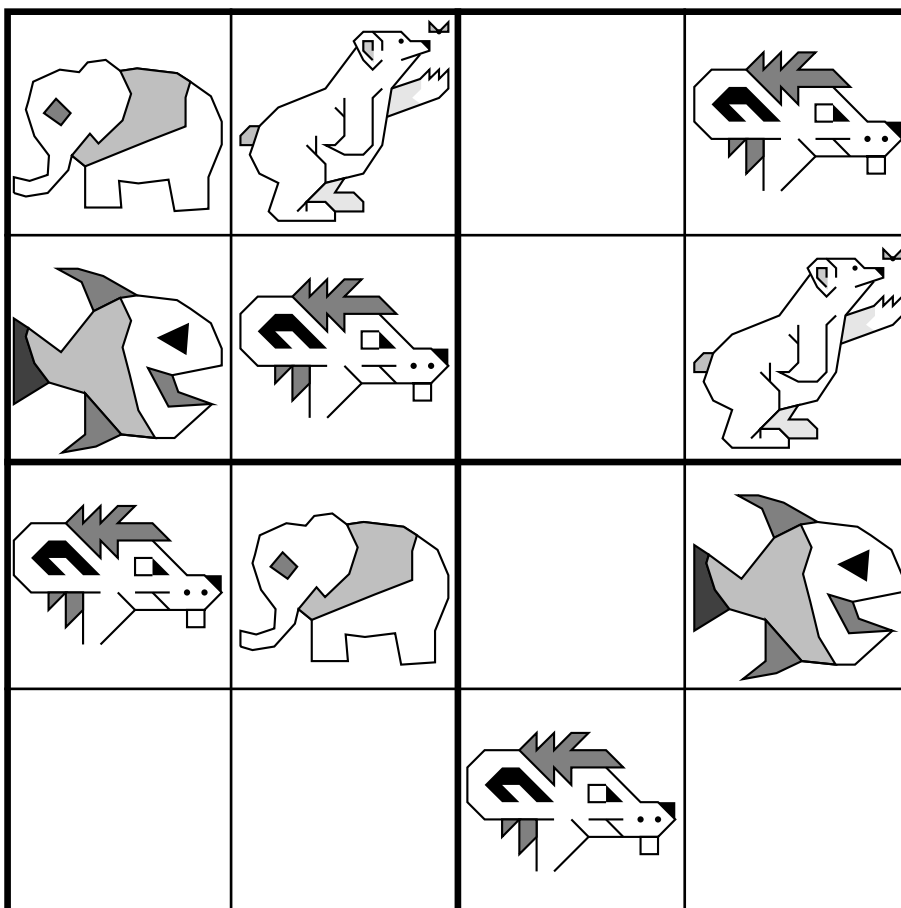
Je complète le carré « en haut à droite » en plaçant un poisson en C2.

Et voilà !

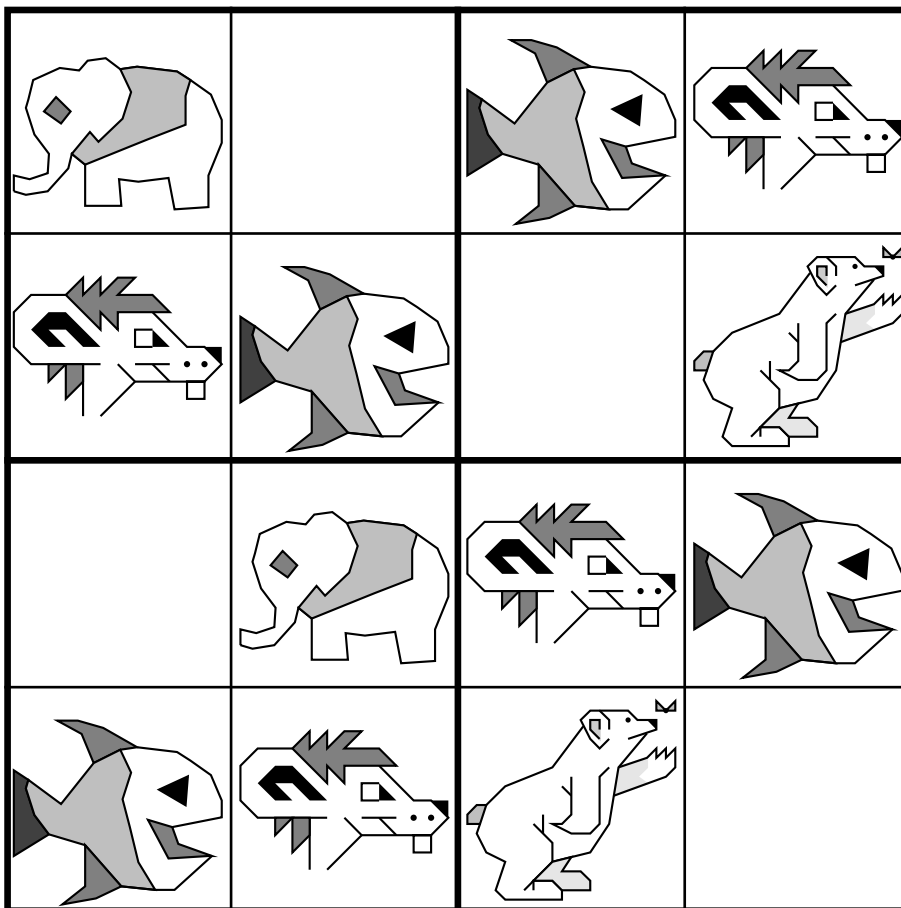
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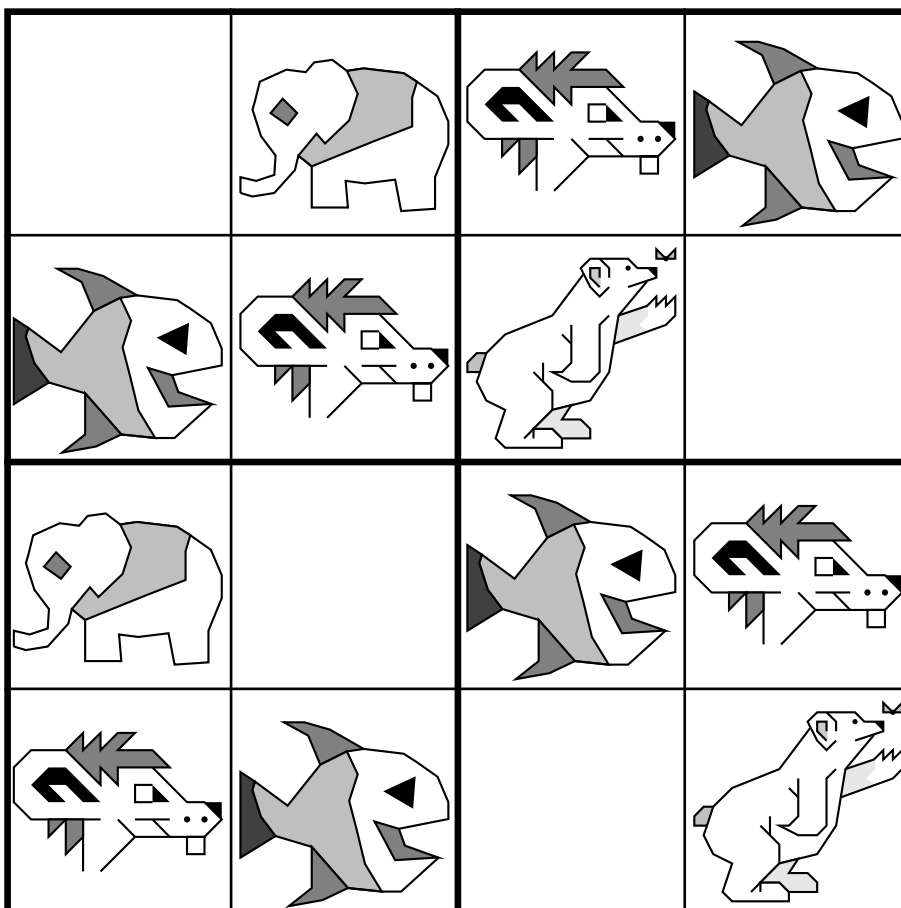
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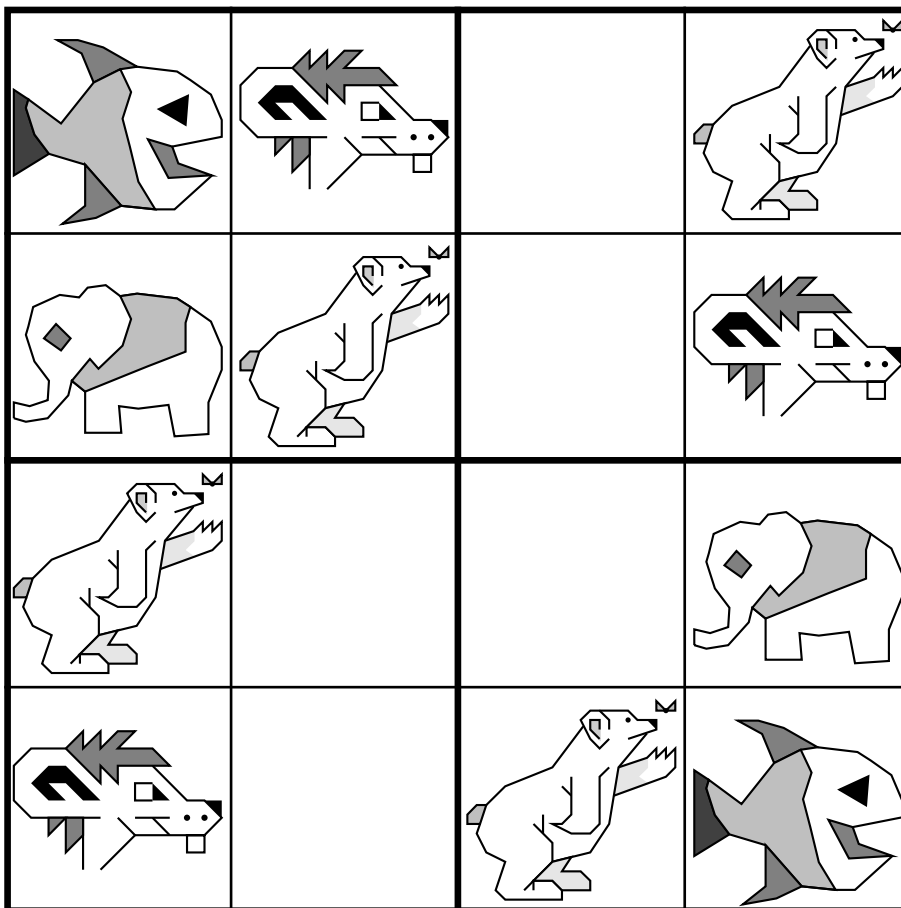
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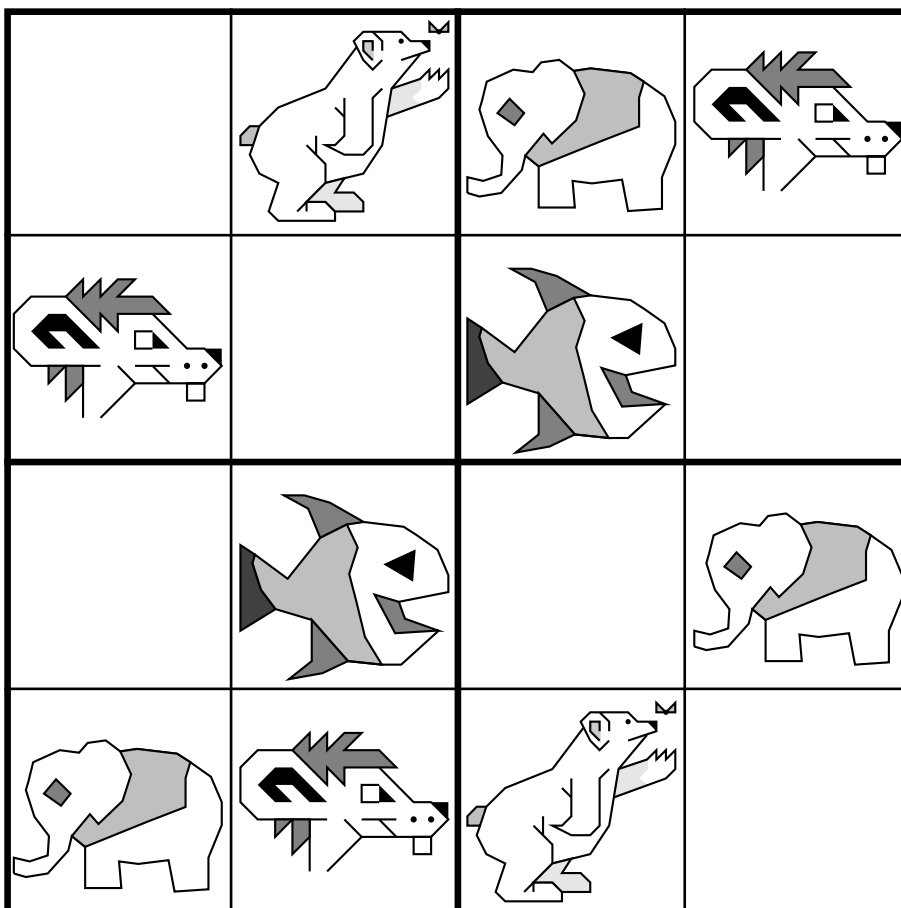
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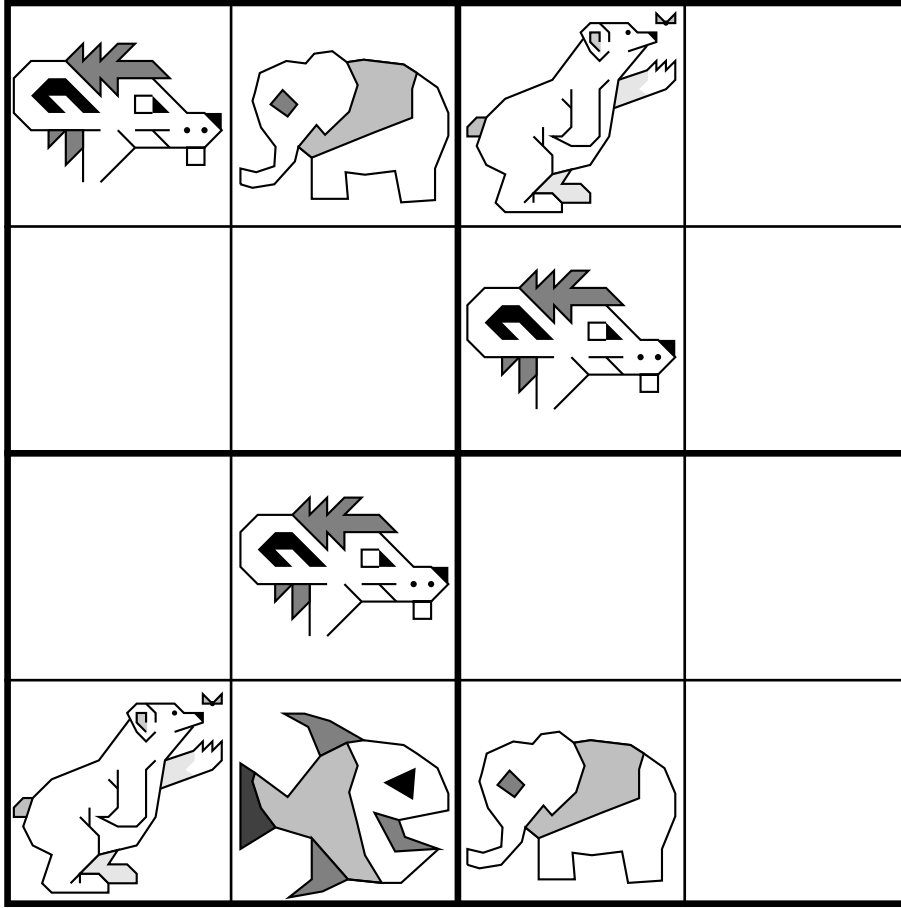
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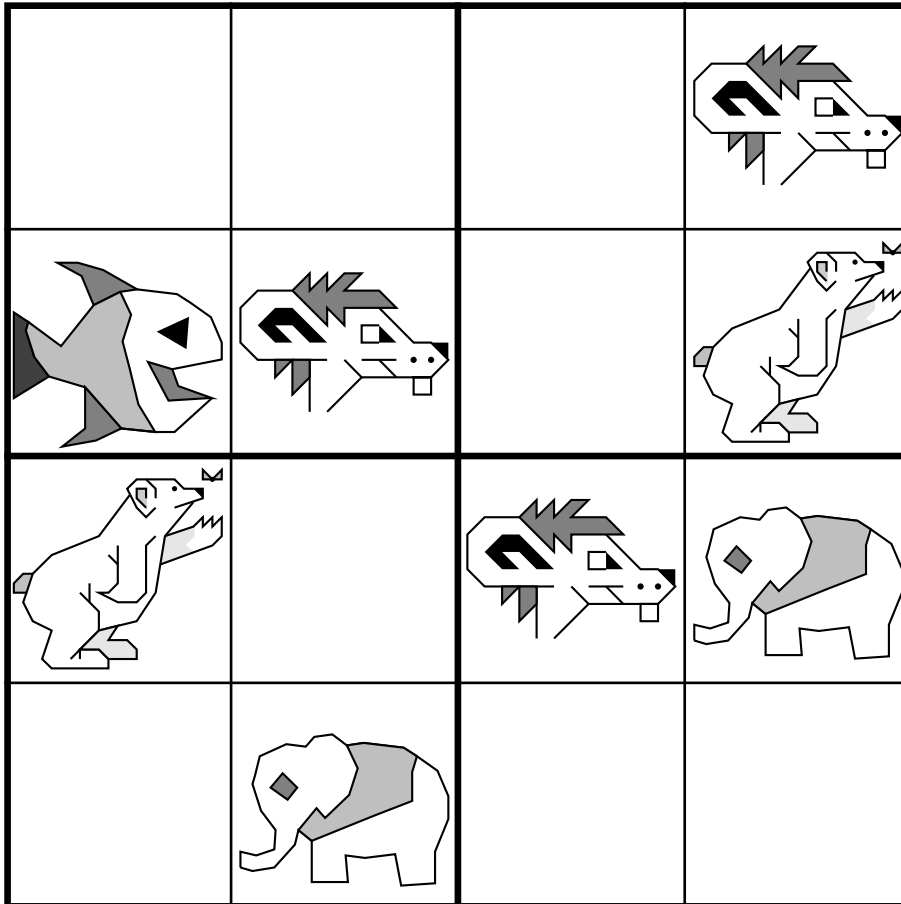
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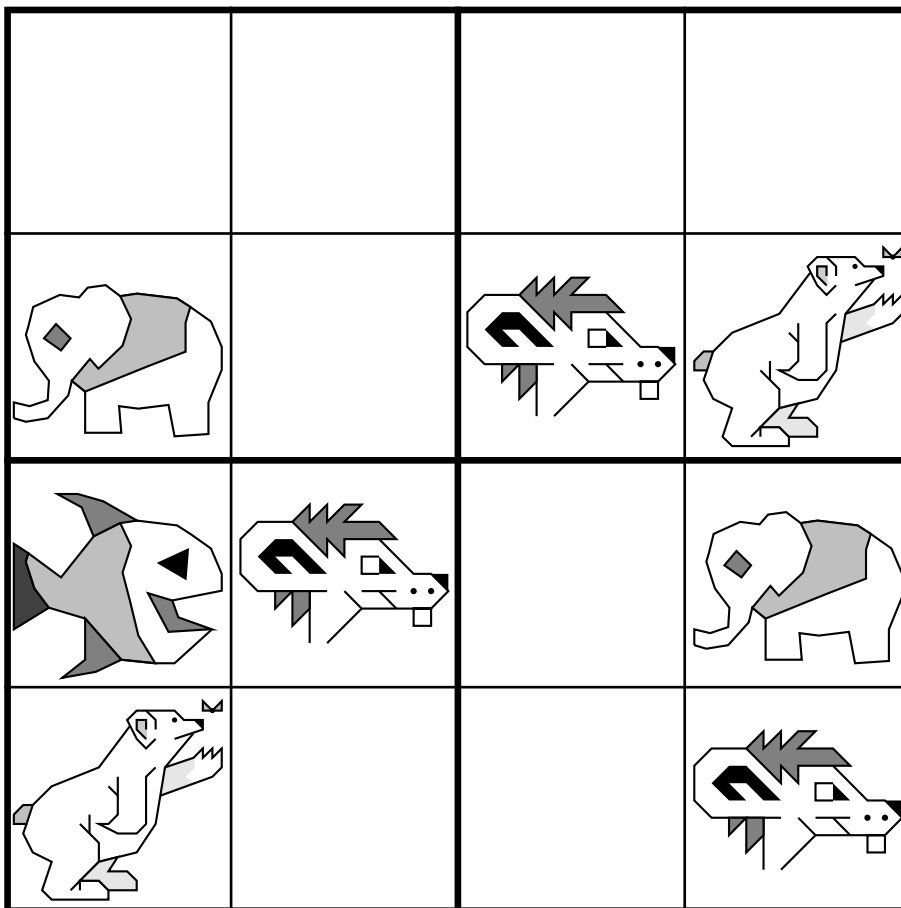
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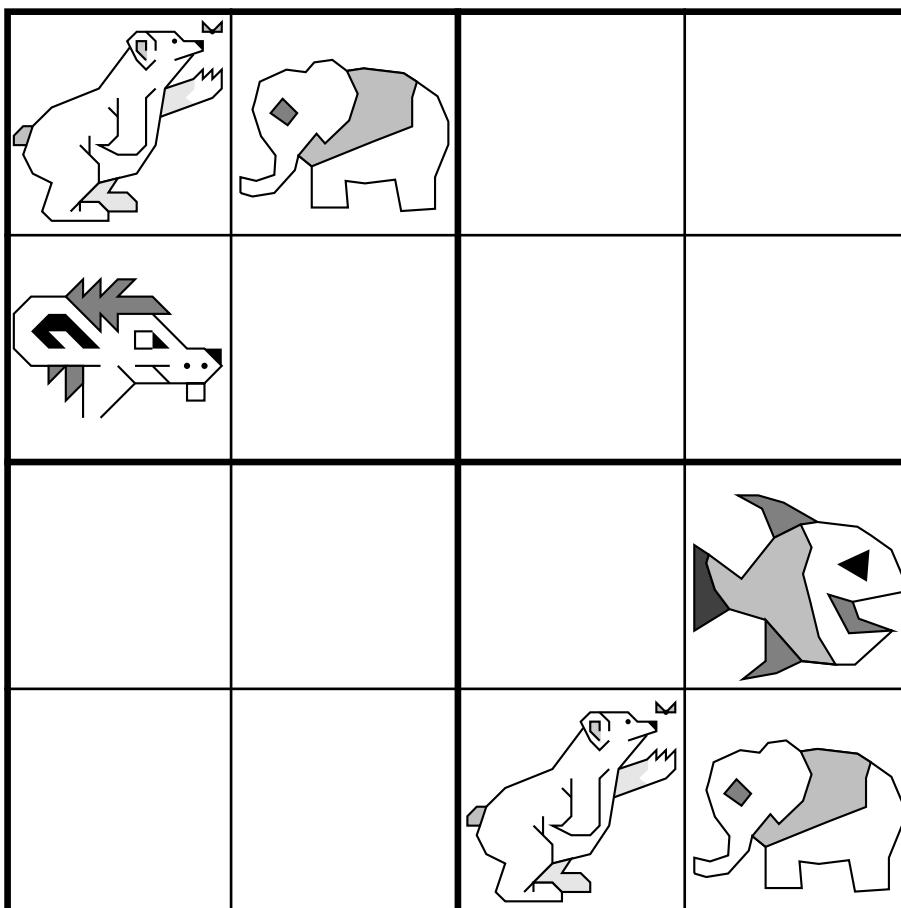
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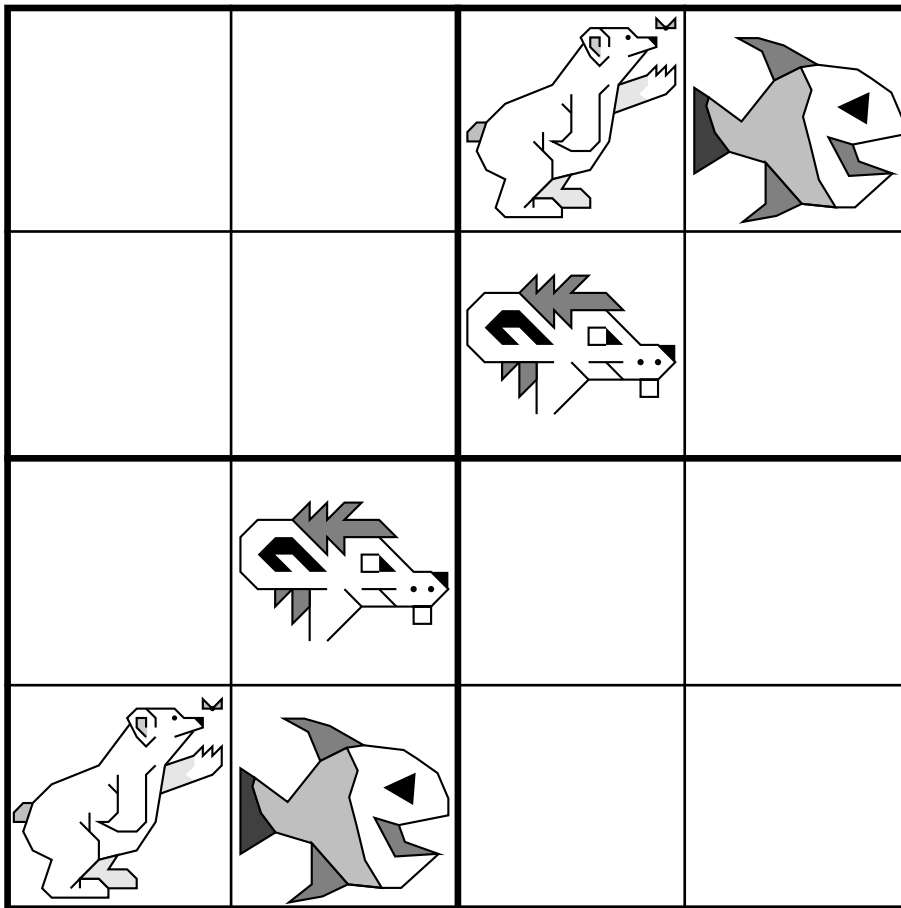
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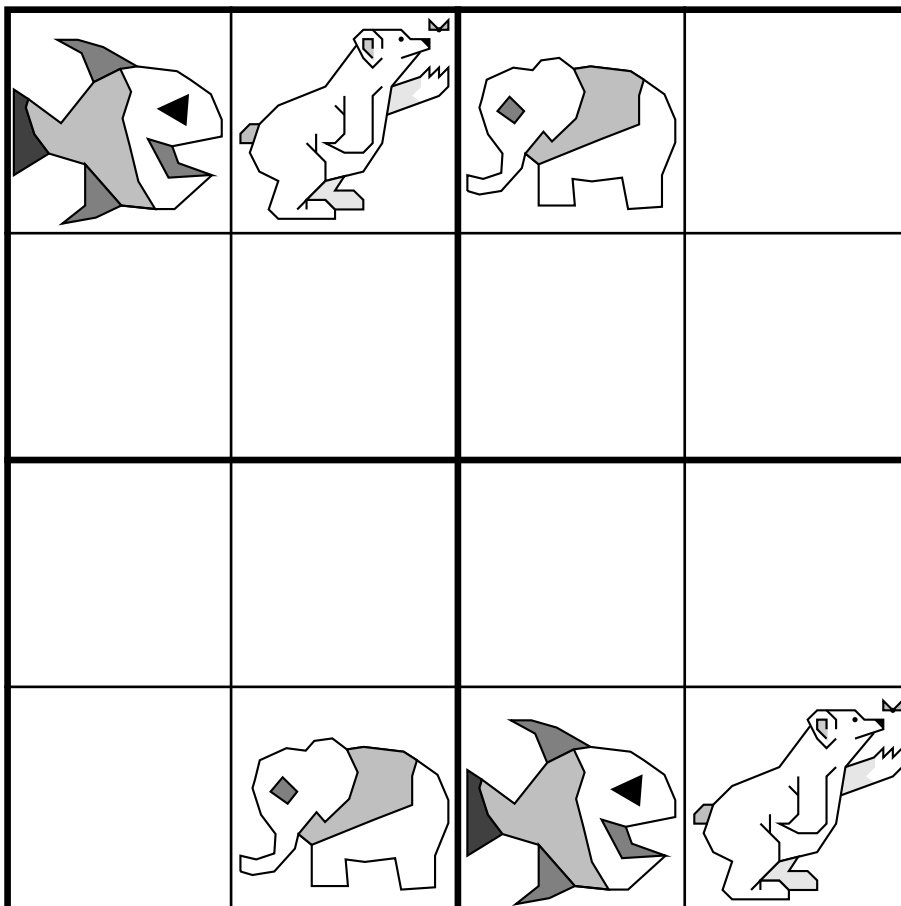
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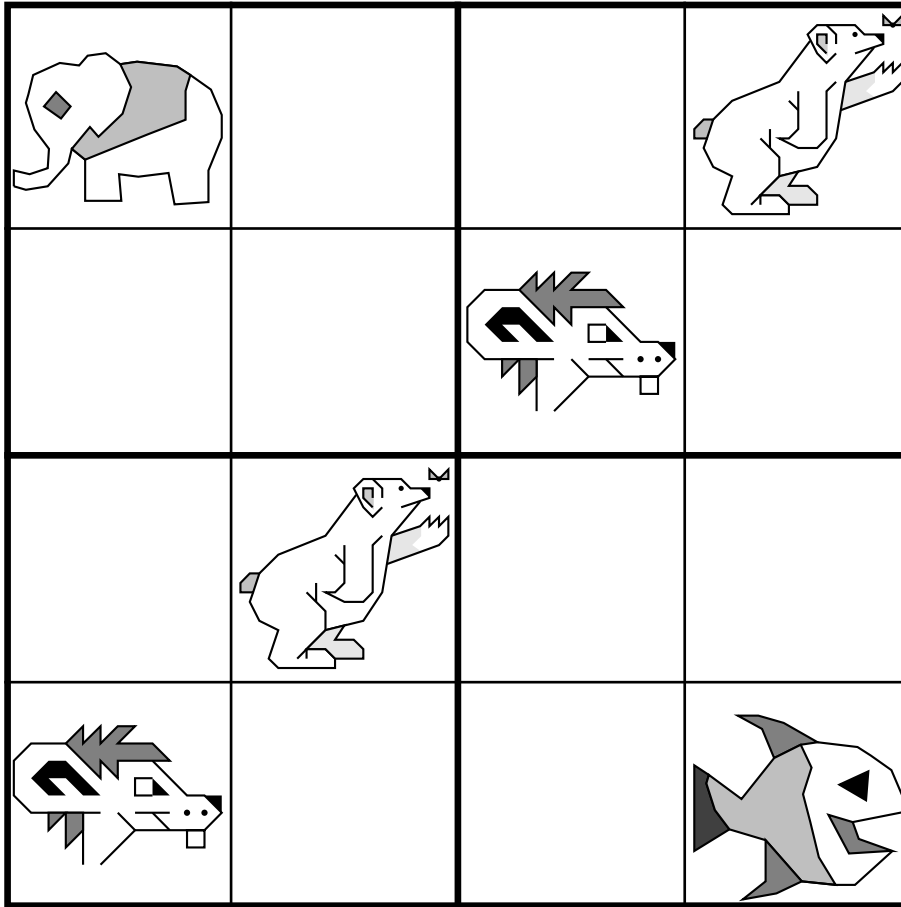


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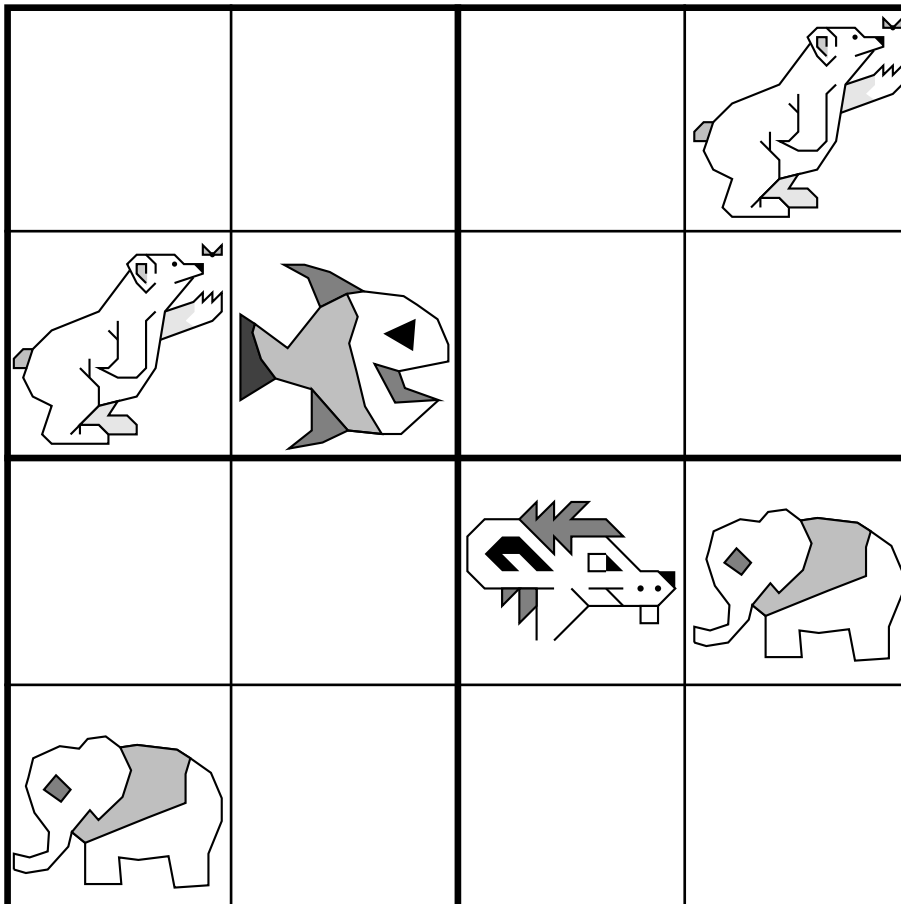




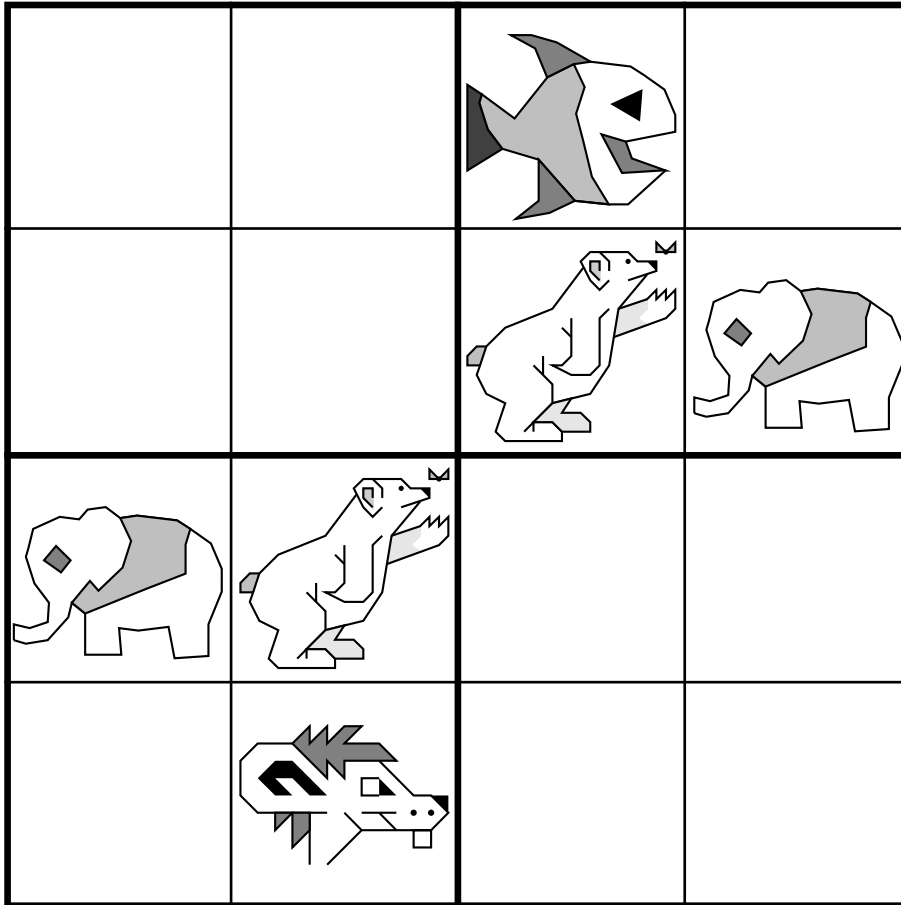
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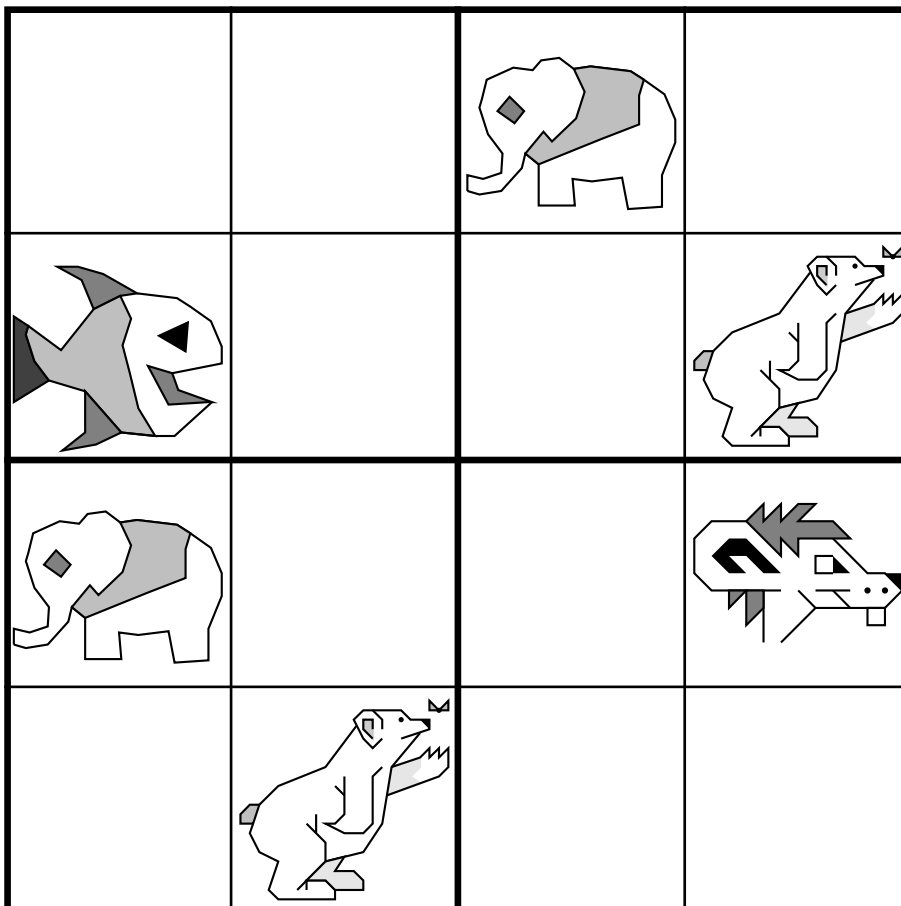
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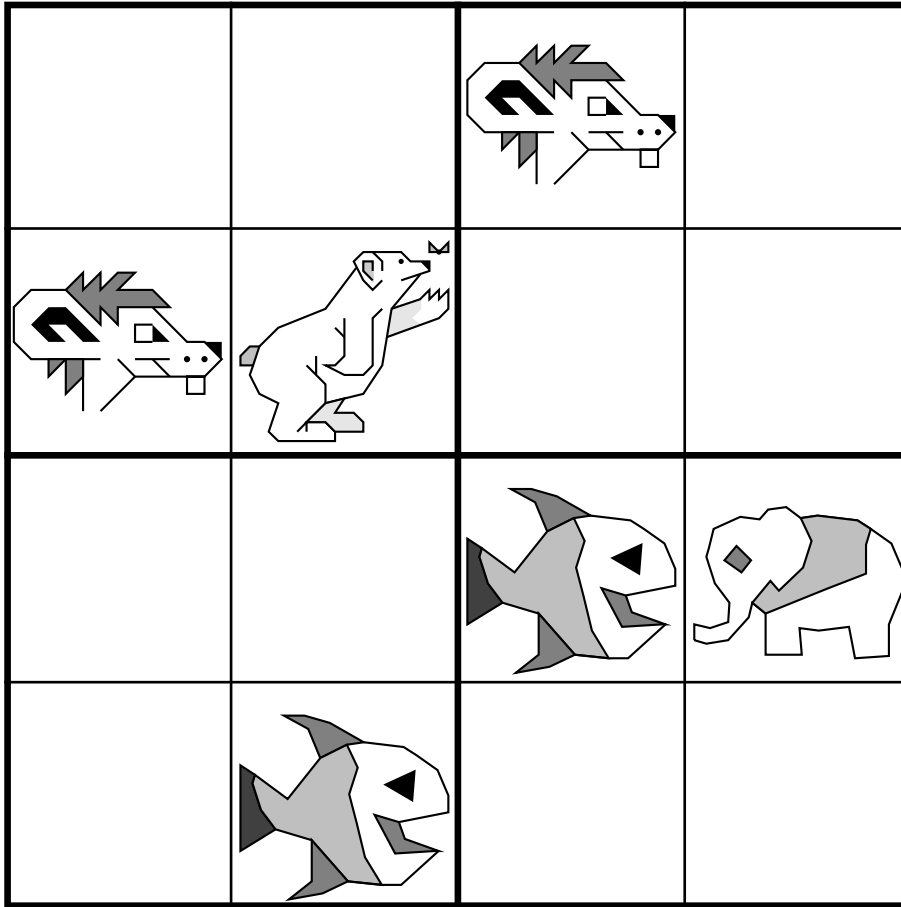
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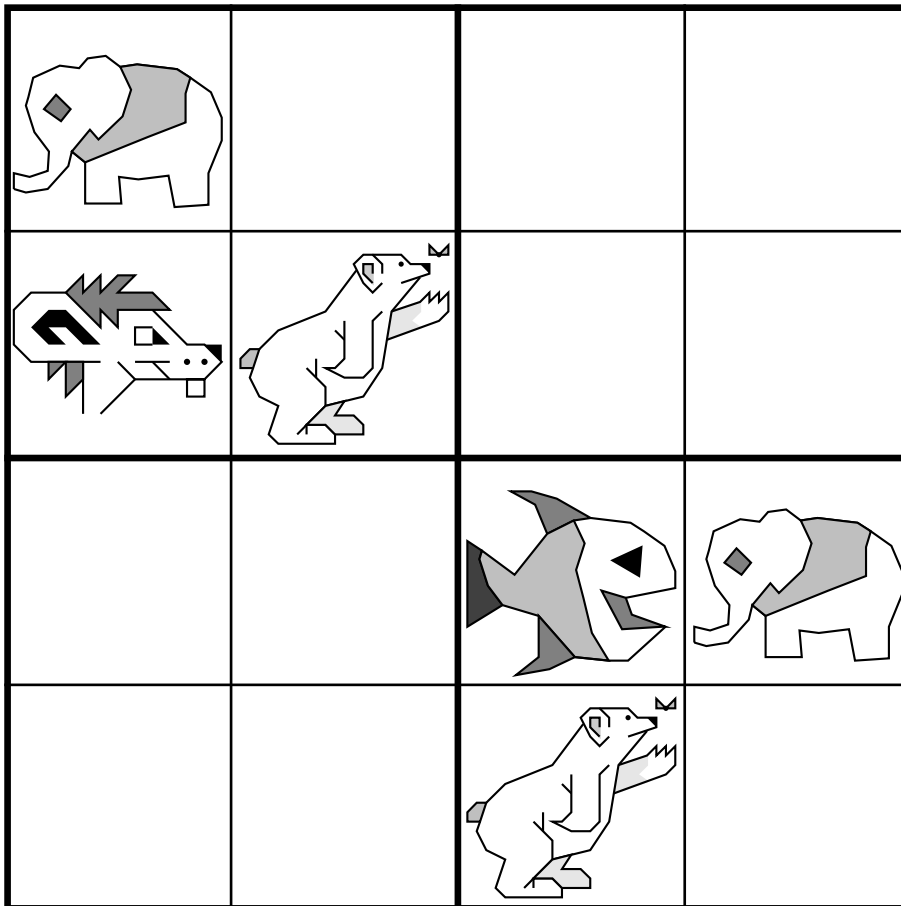
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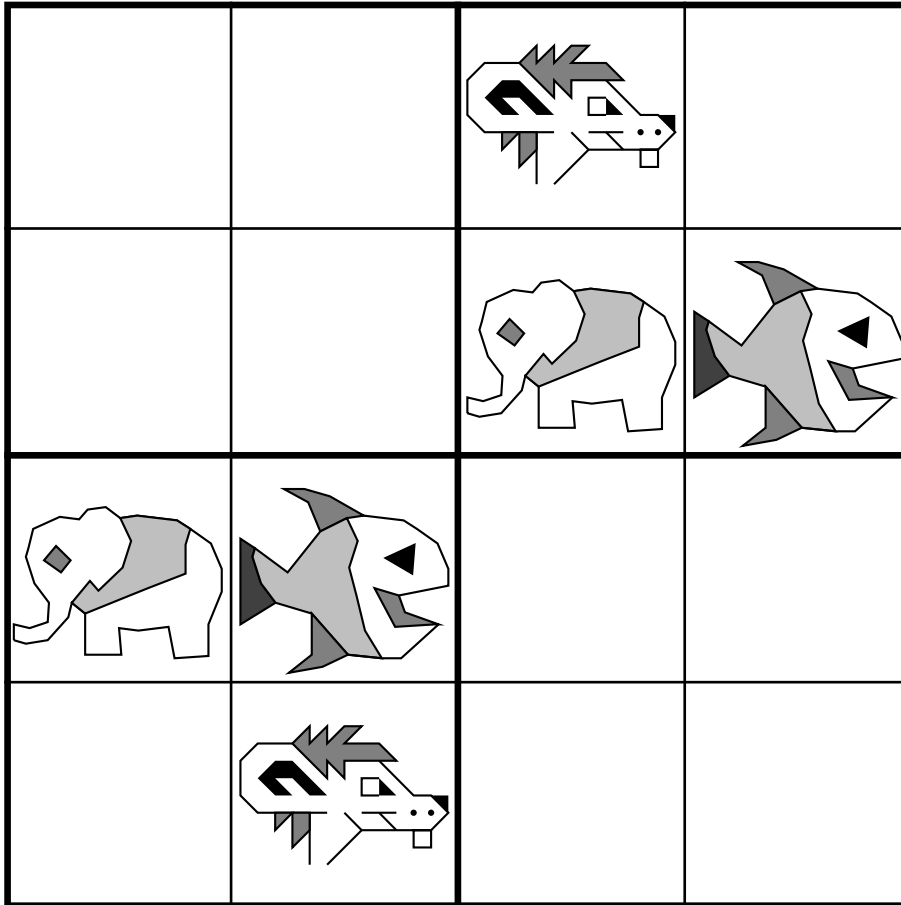
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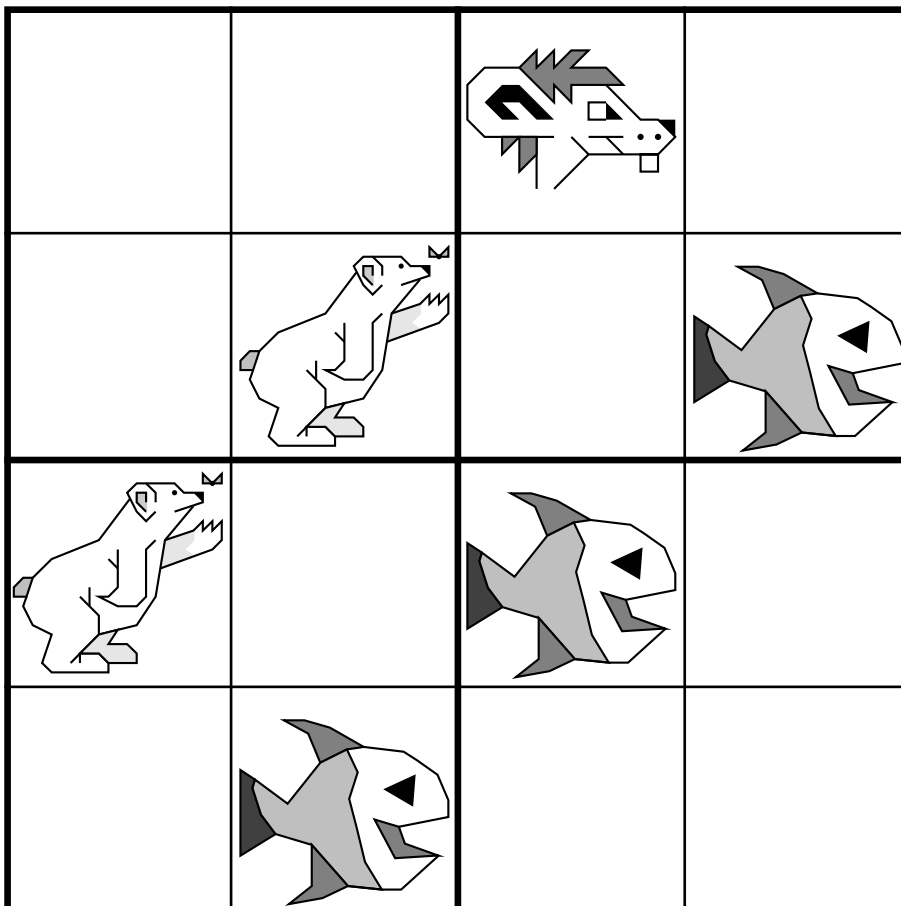
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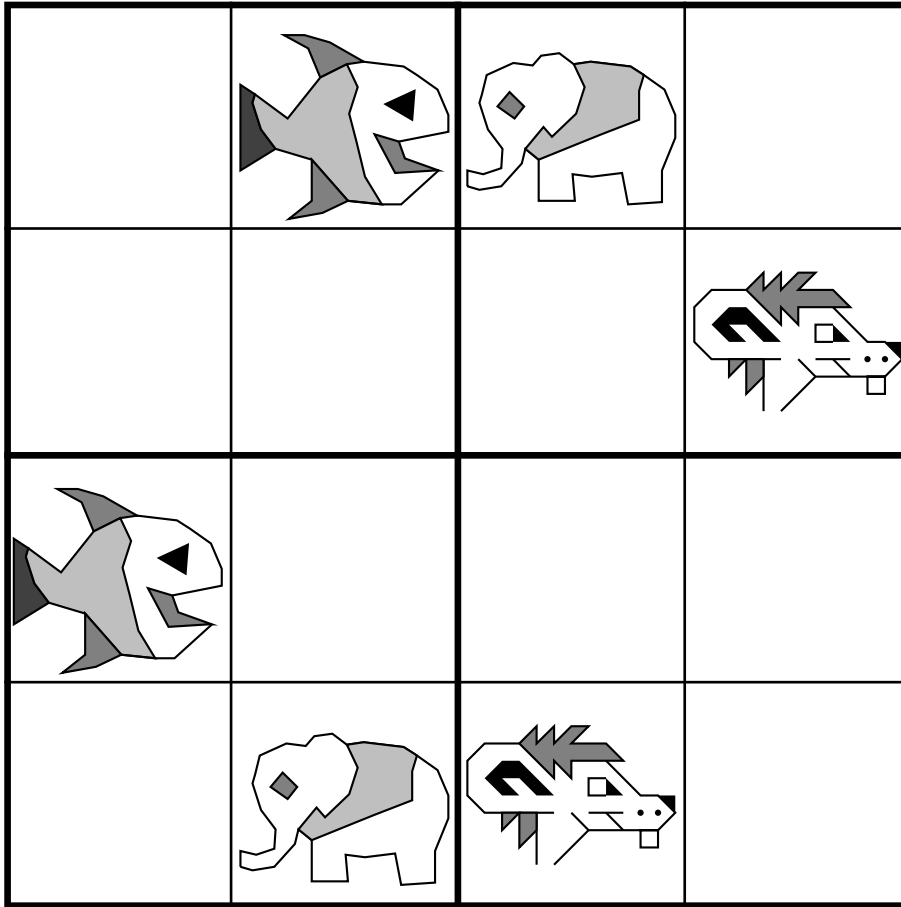
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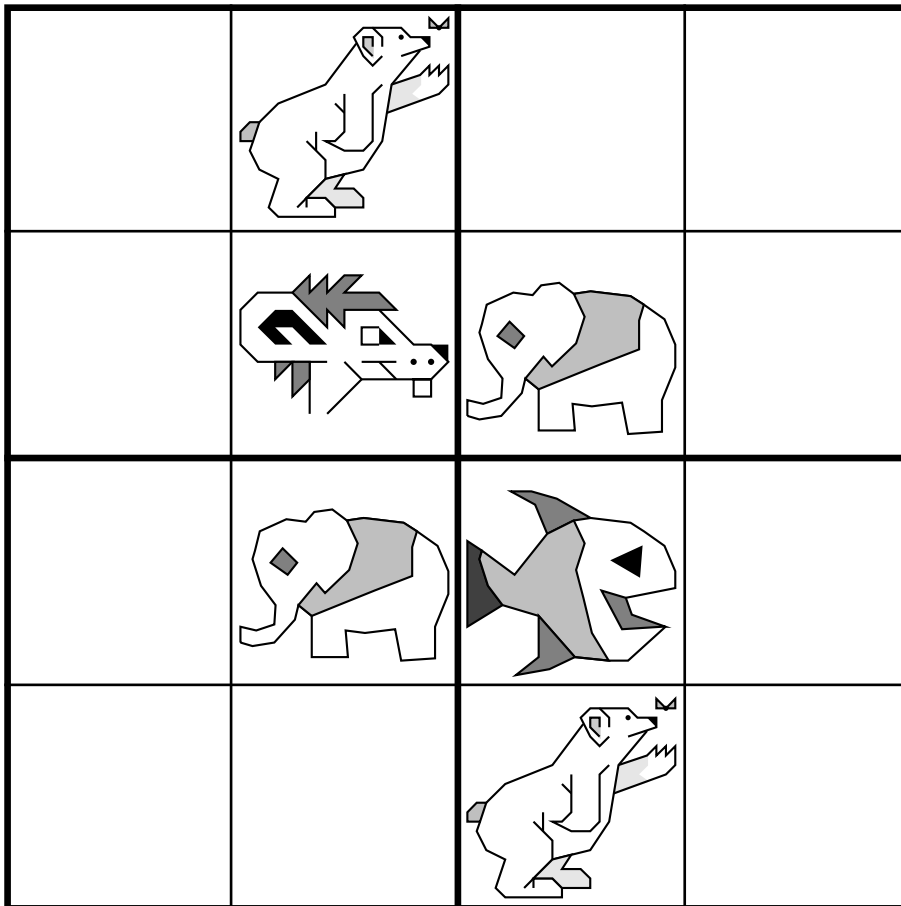
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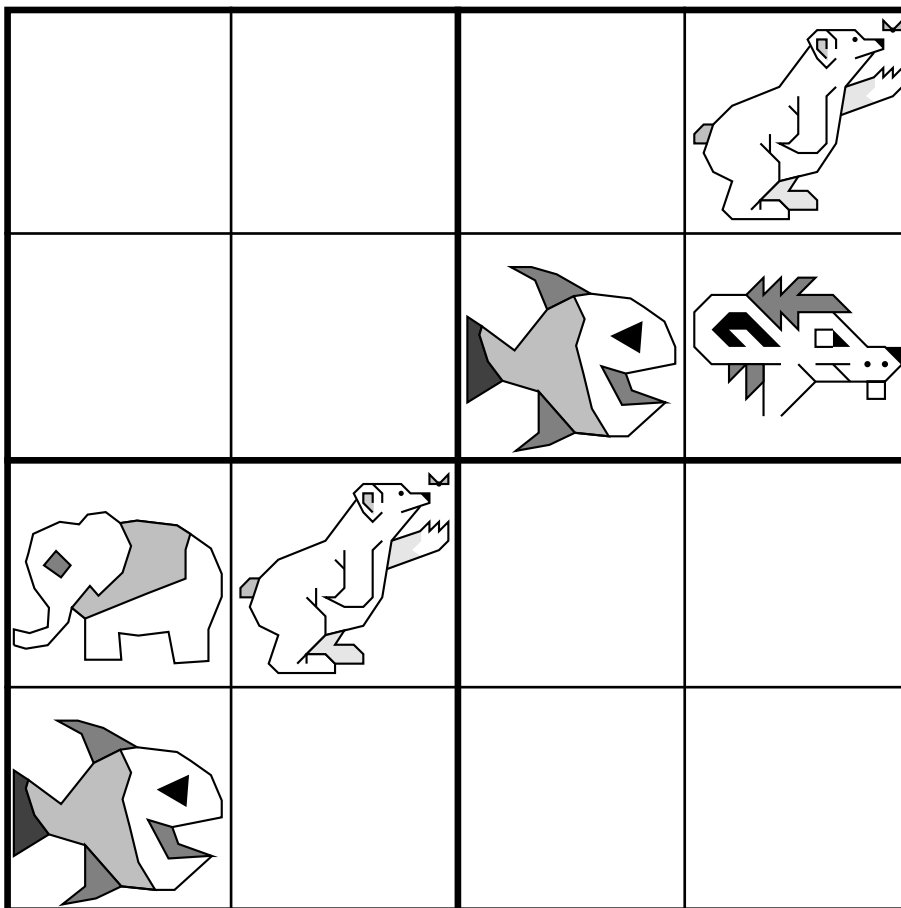
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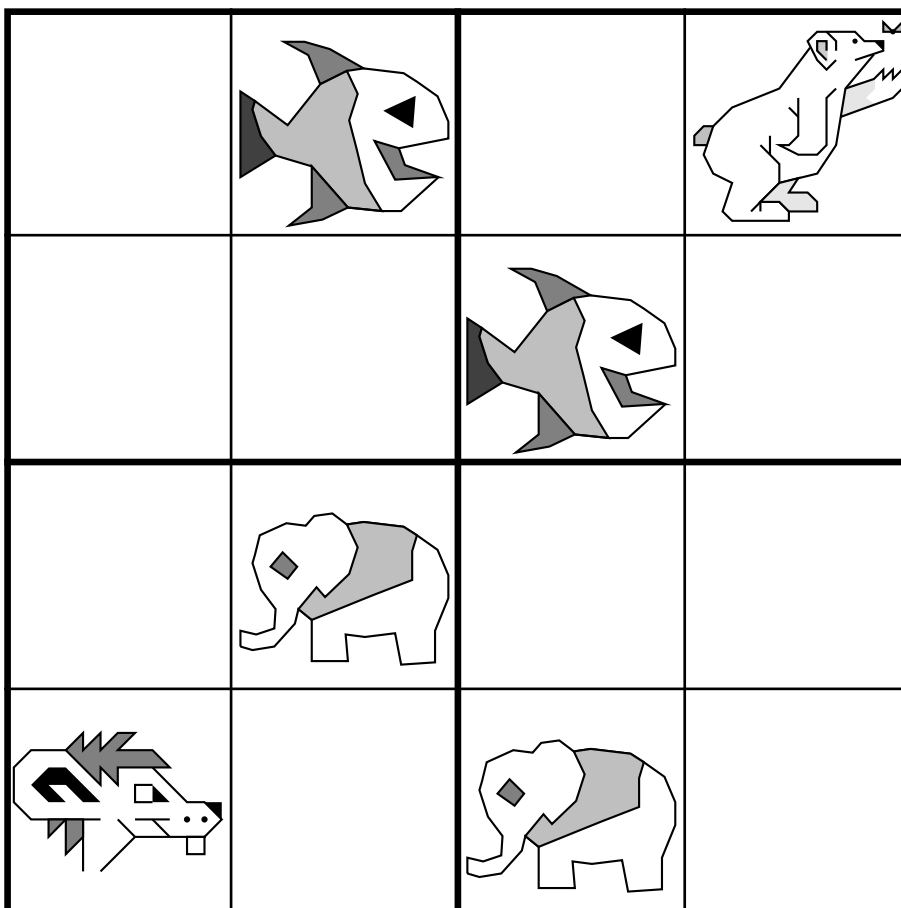
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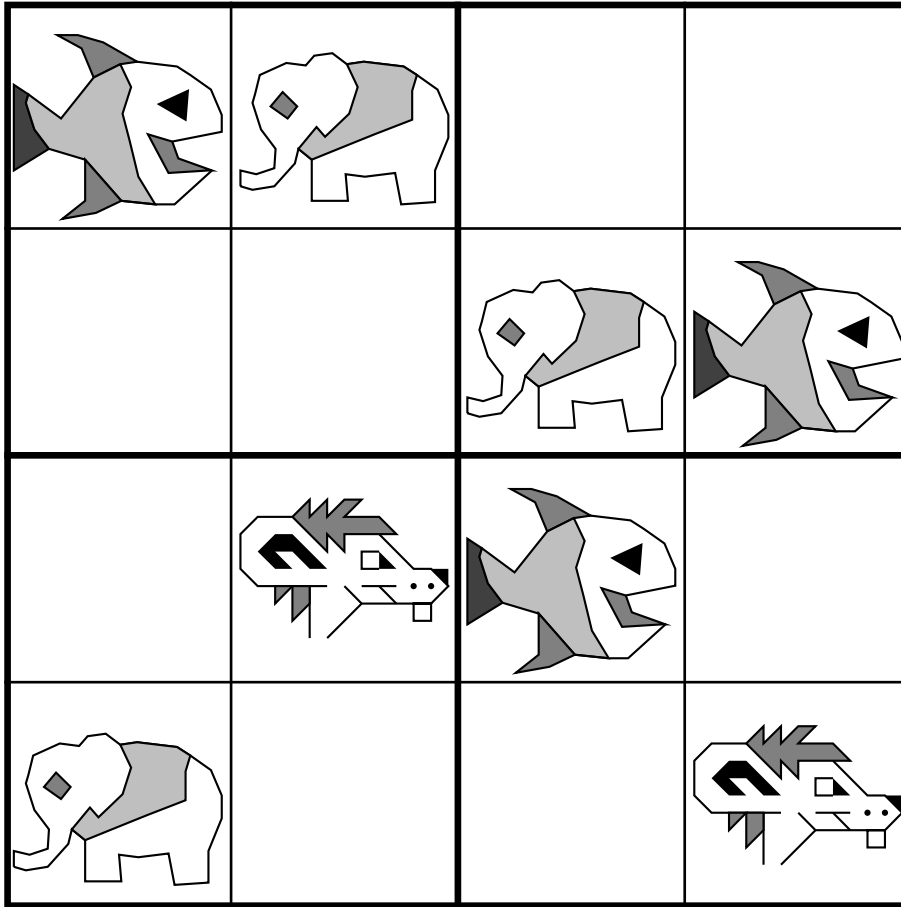
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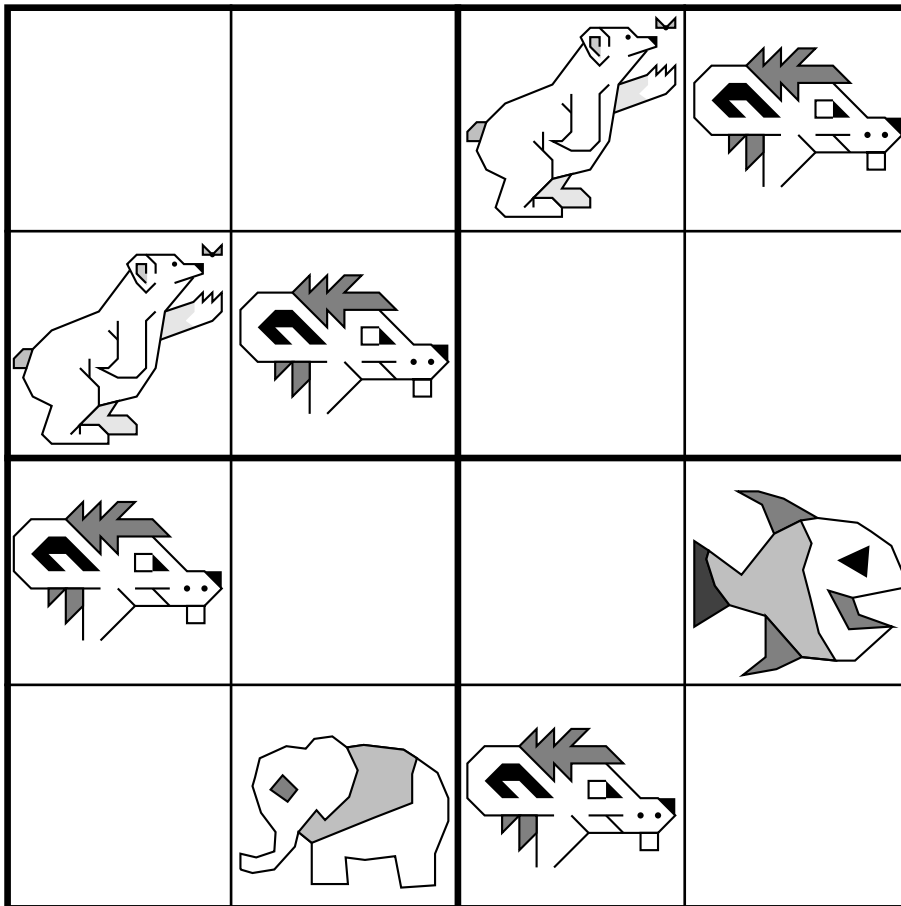
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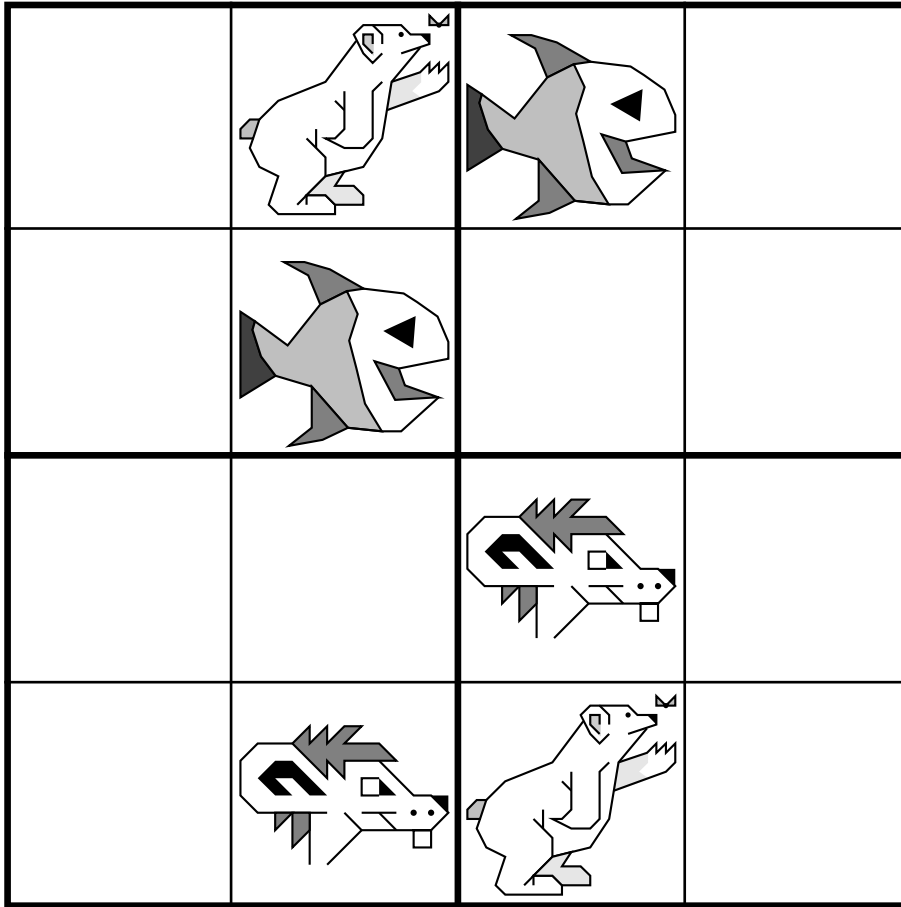
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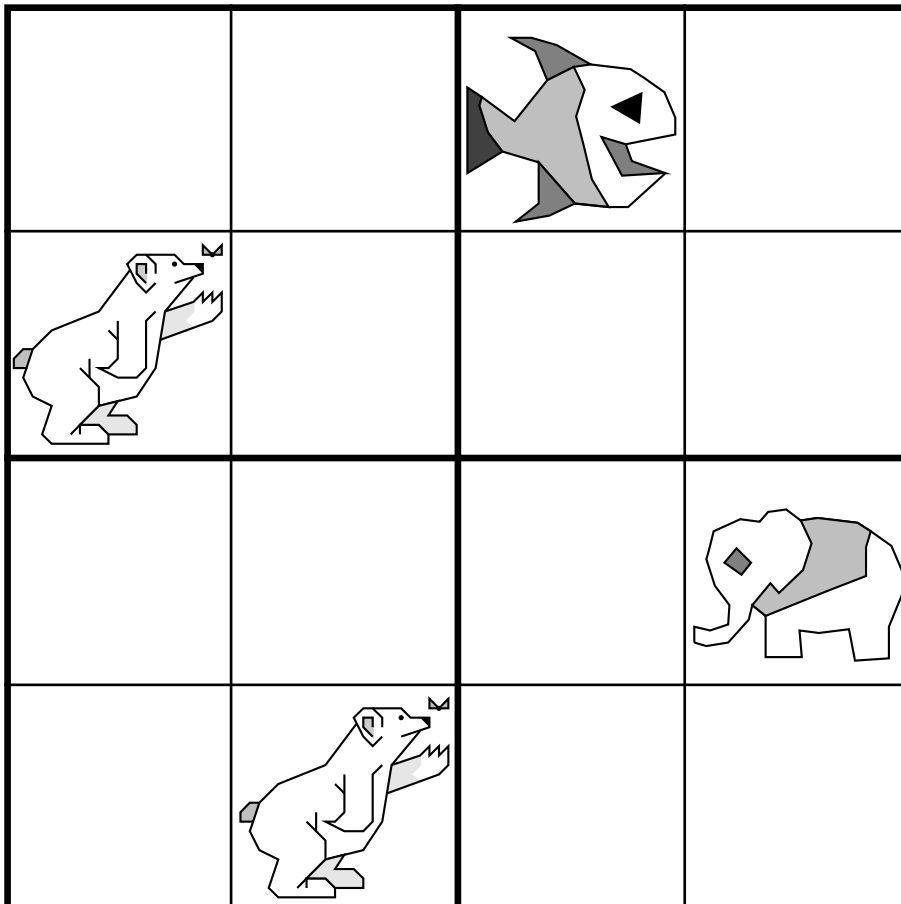
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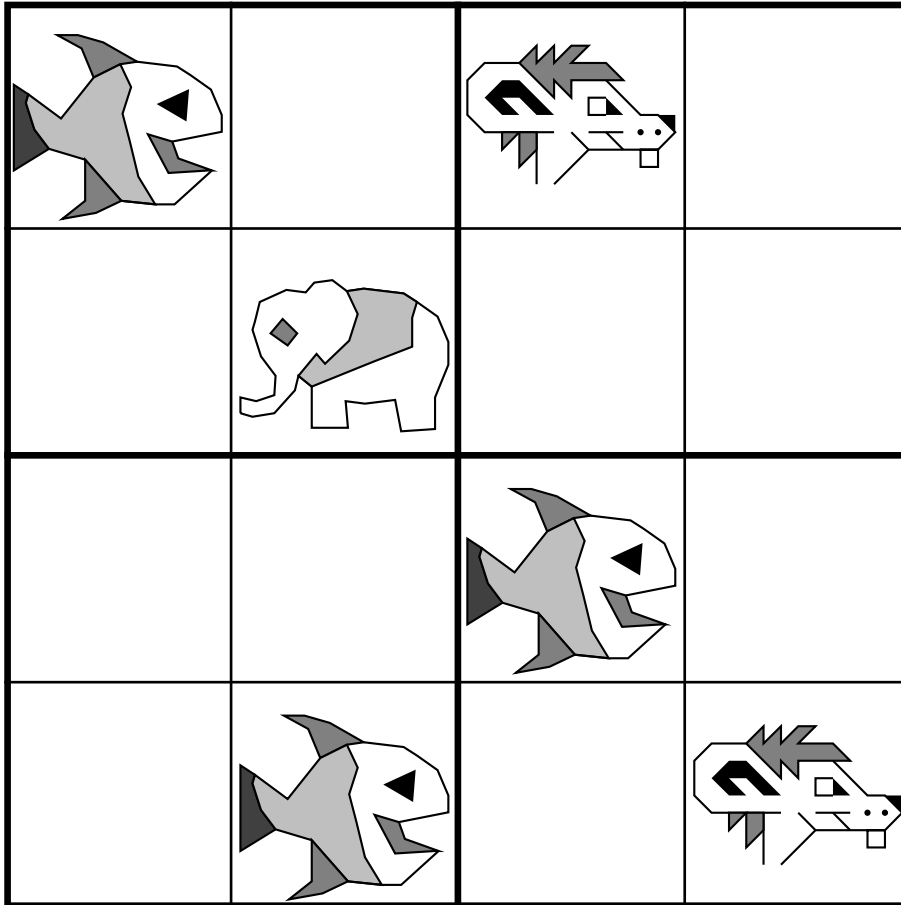


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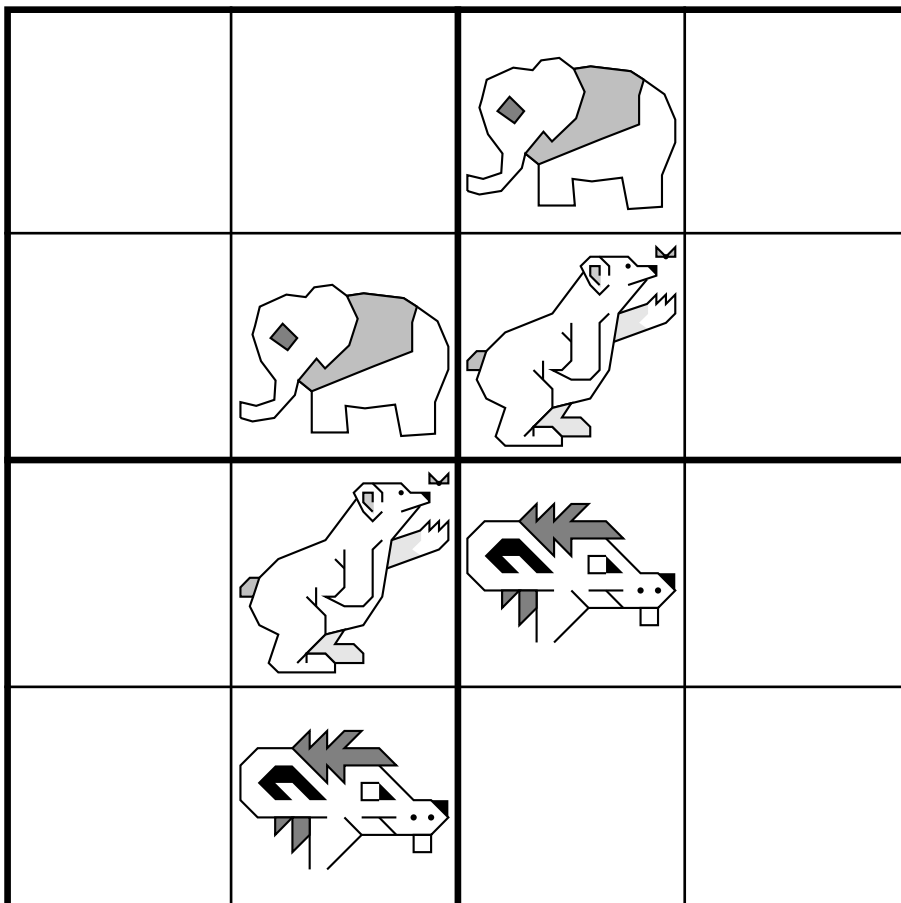




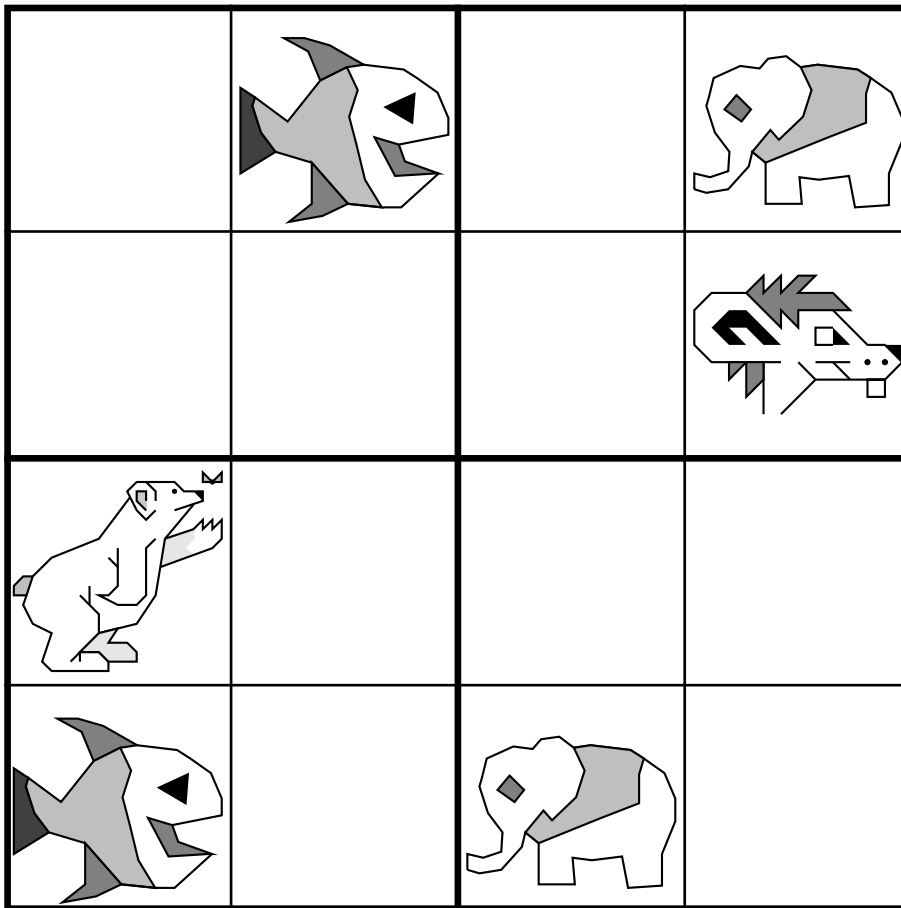
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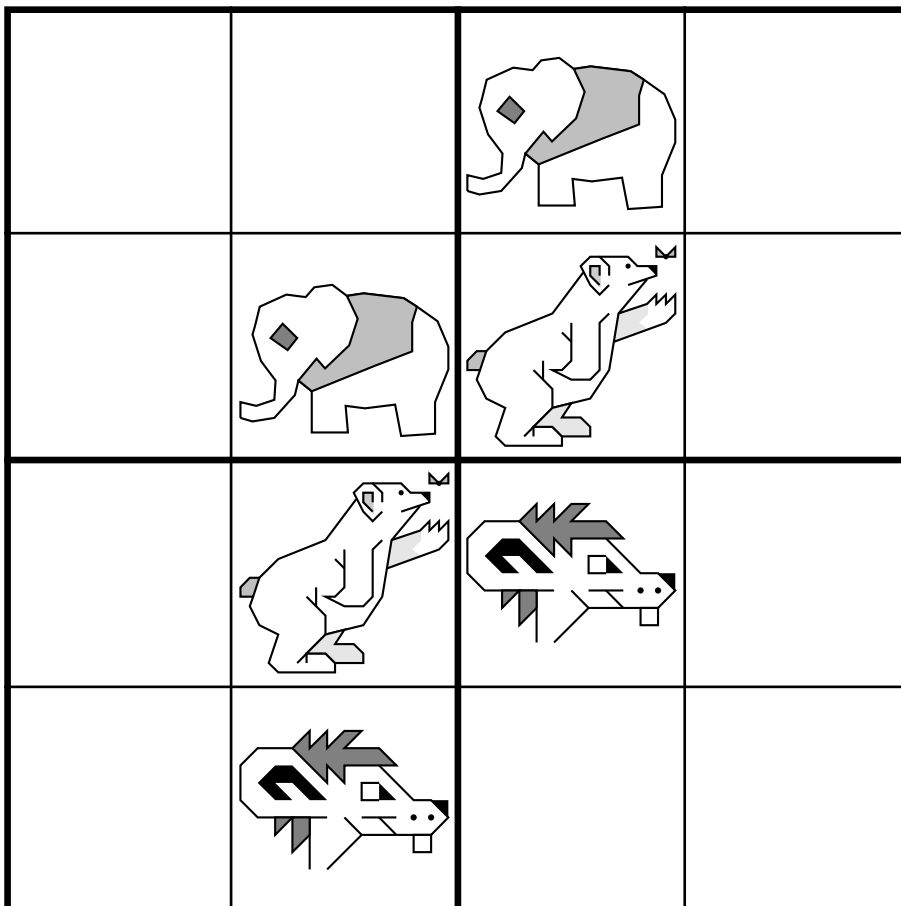
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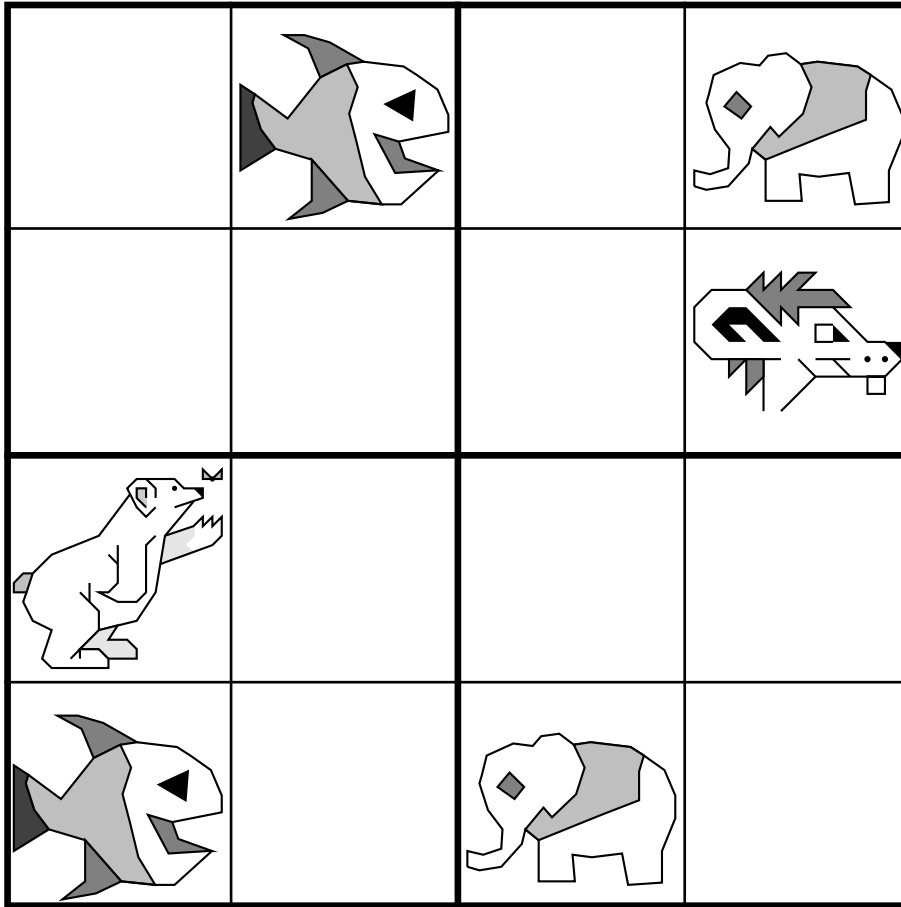
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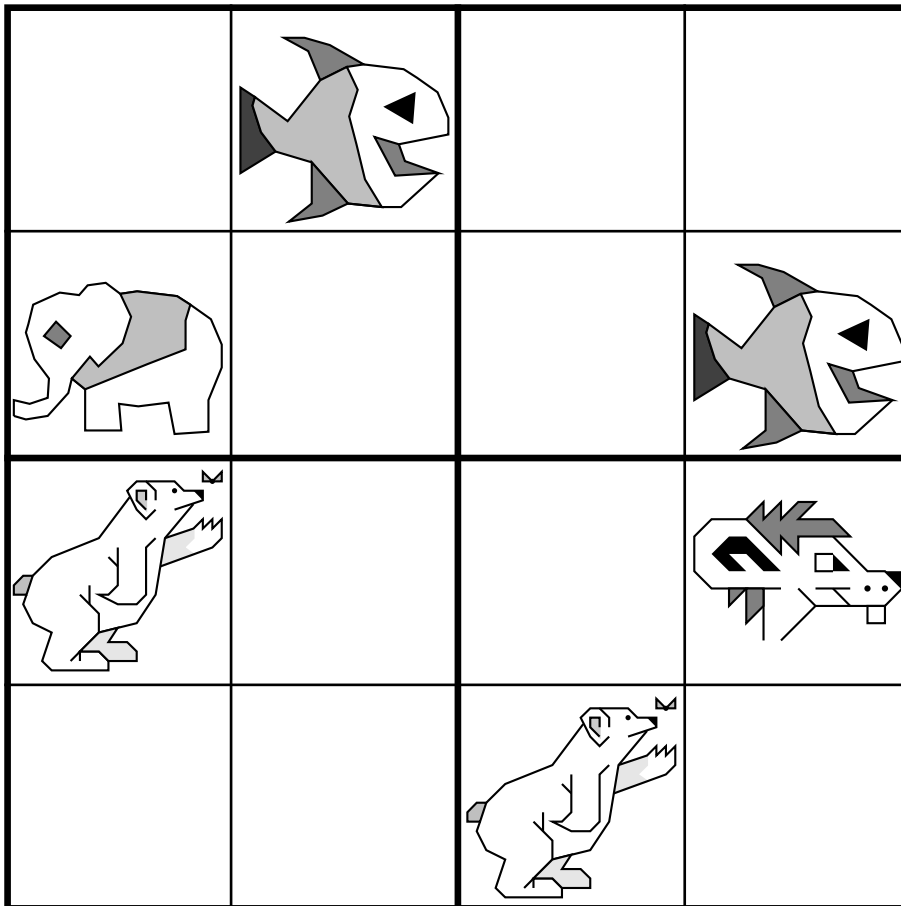
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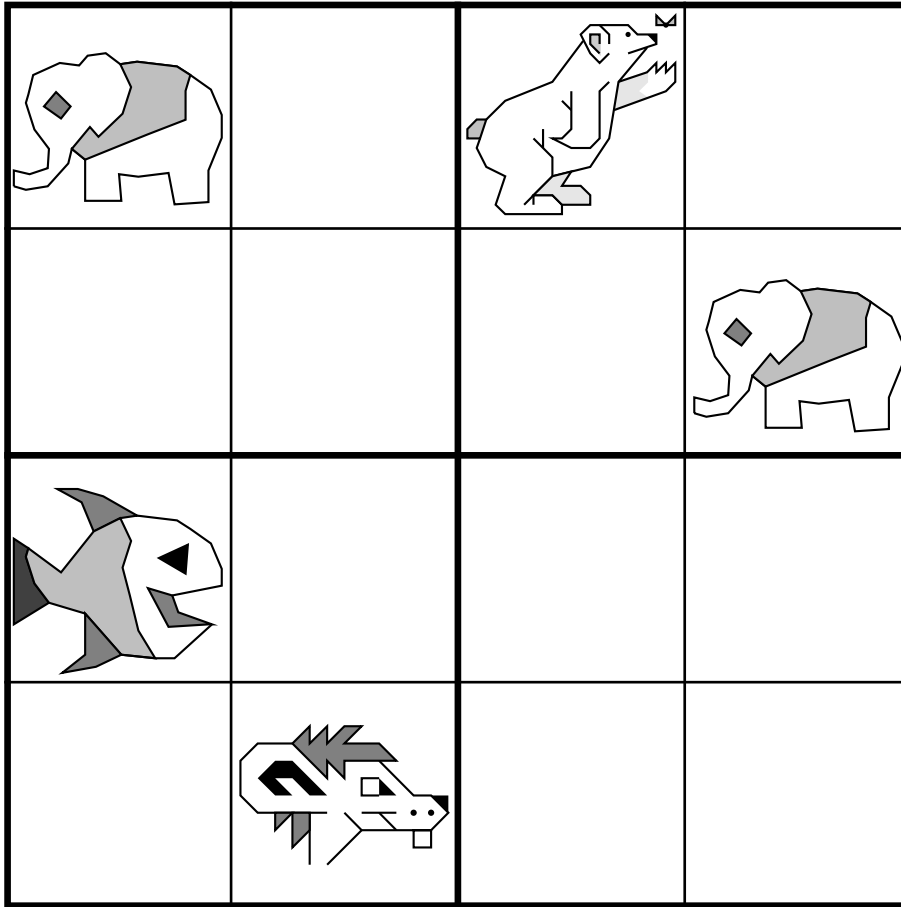
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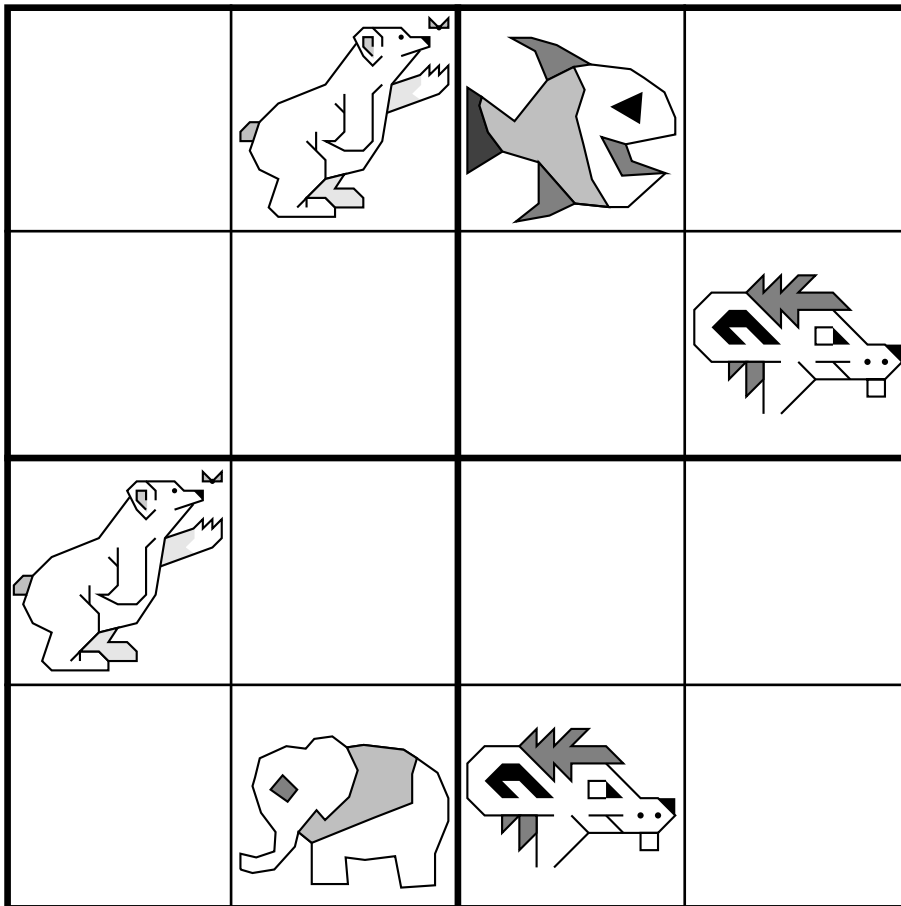
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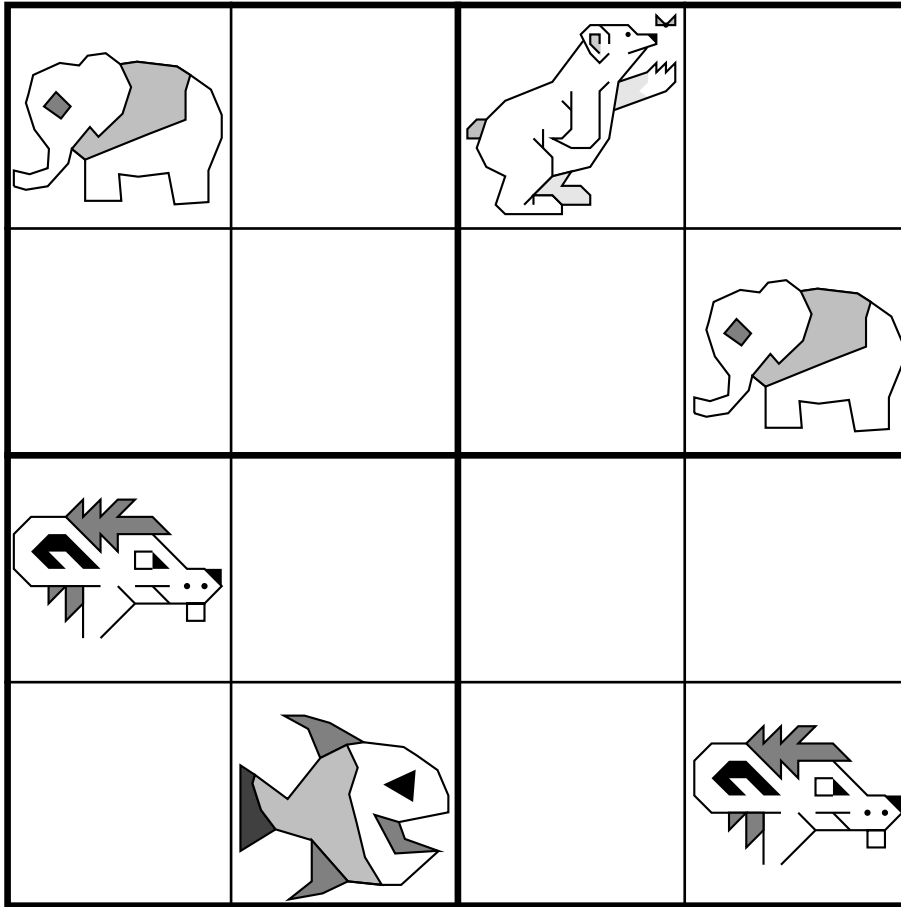
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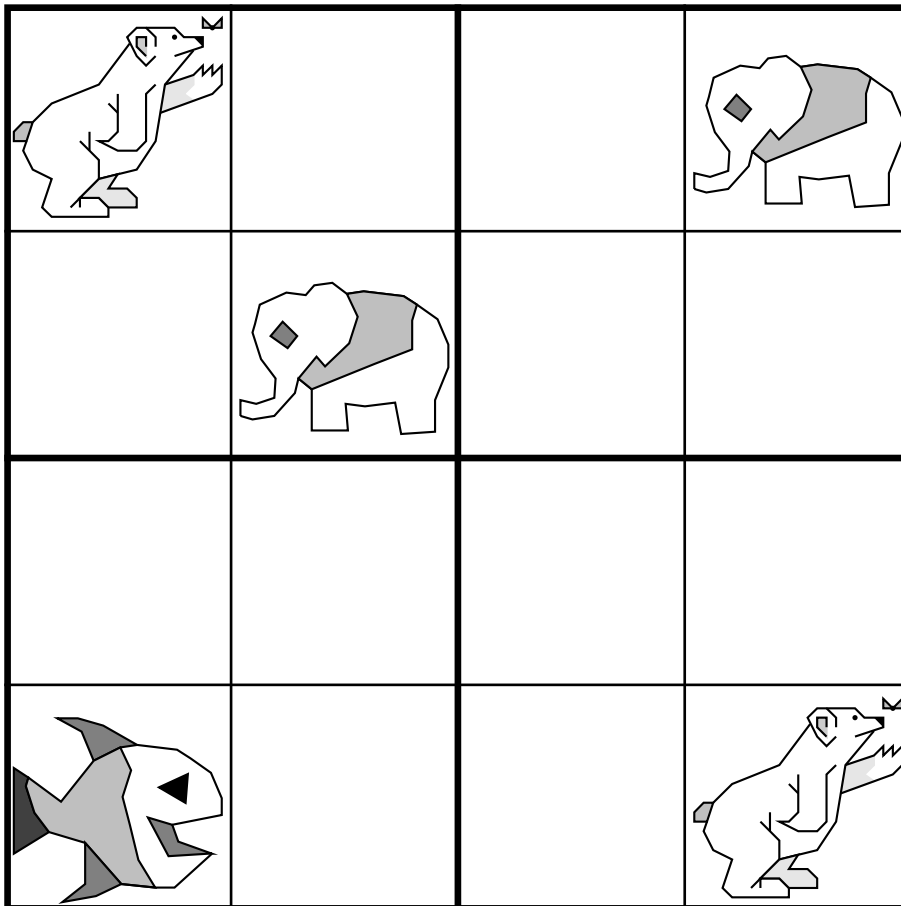
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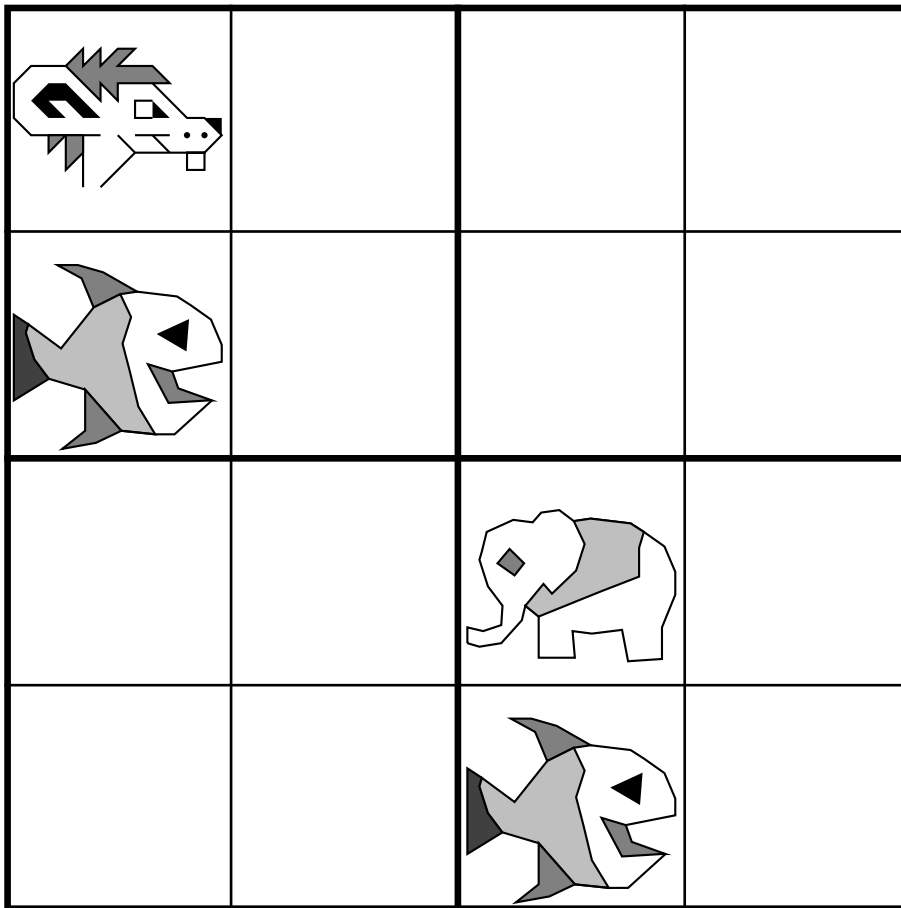
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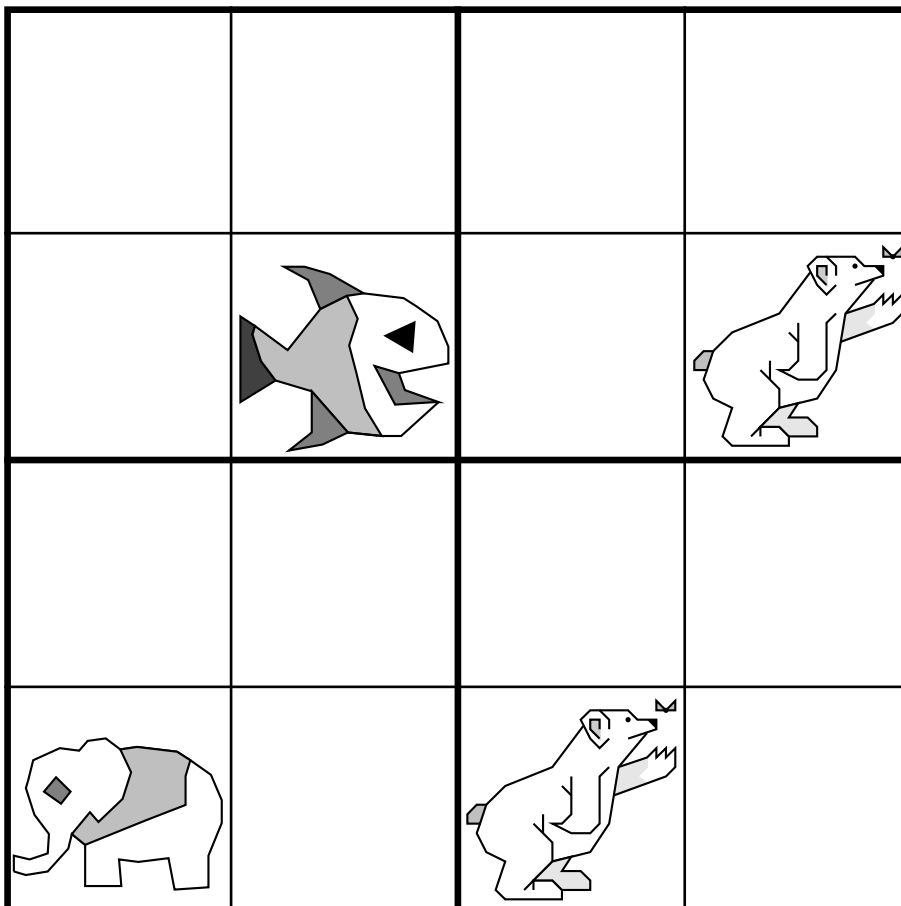
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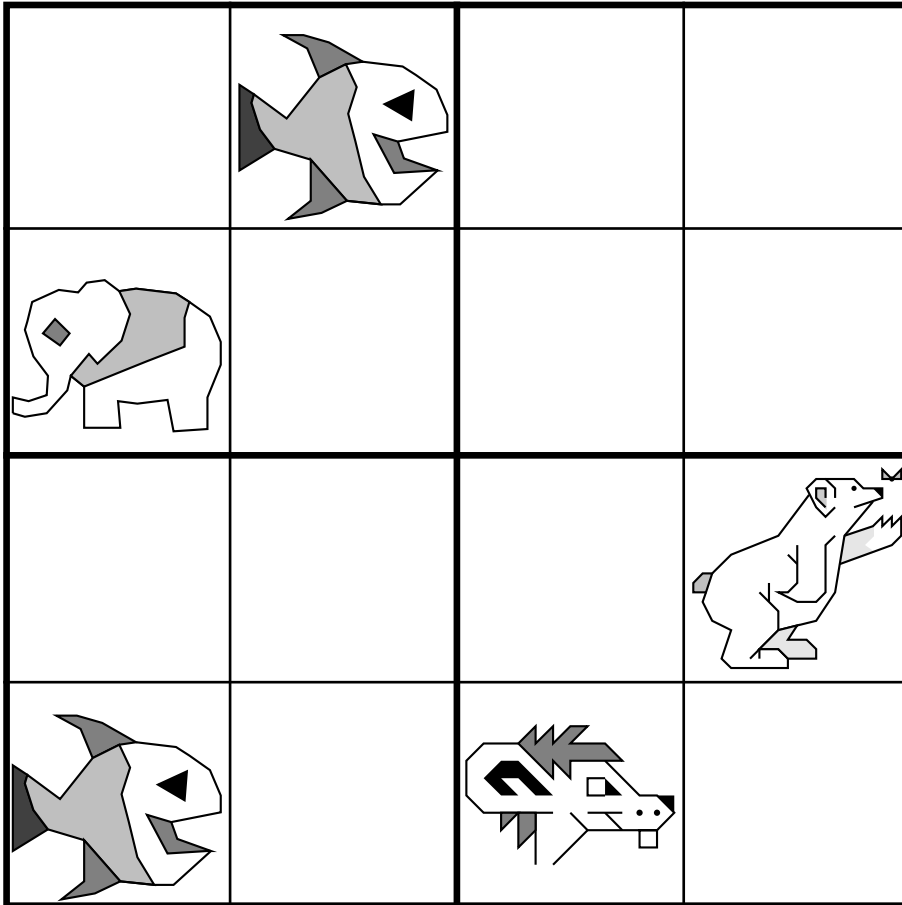
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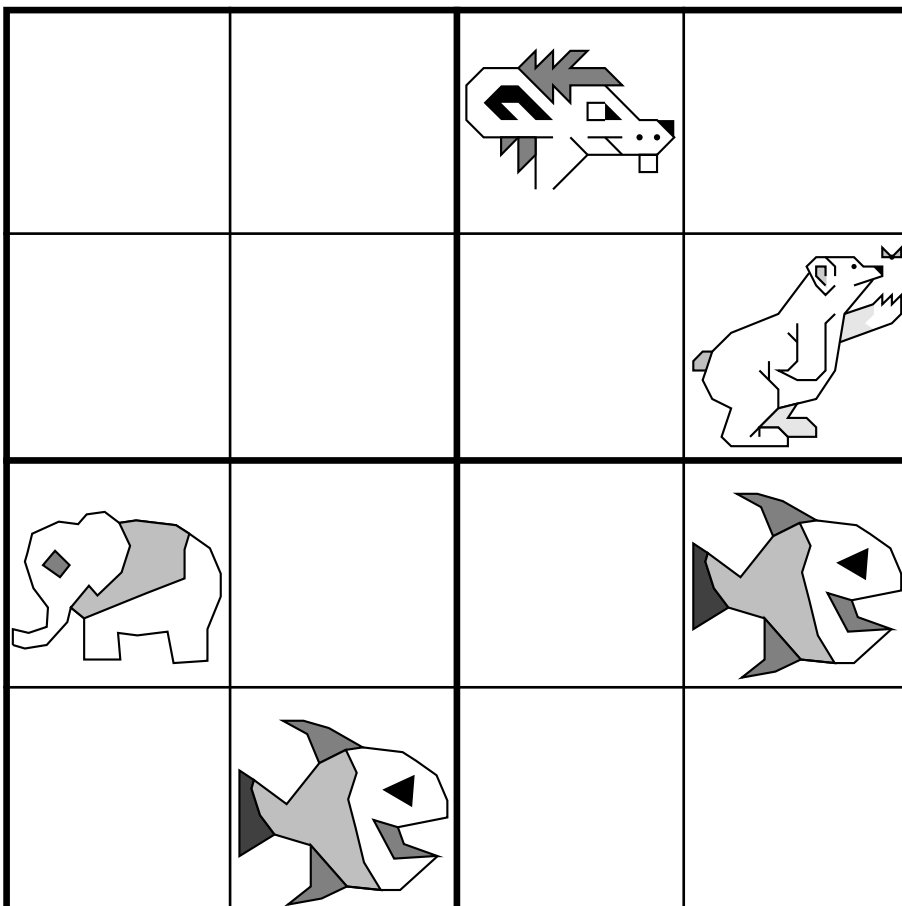
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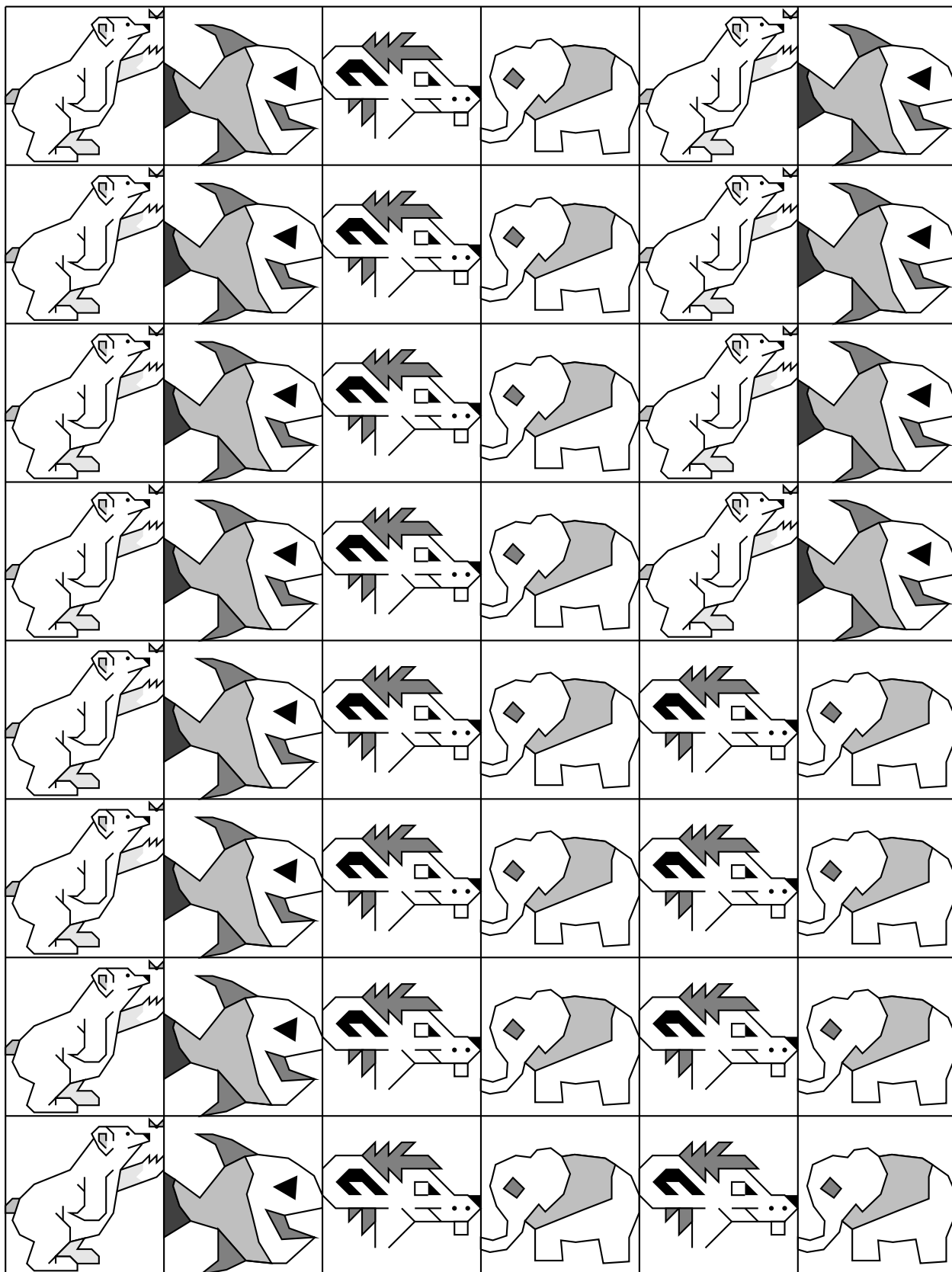


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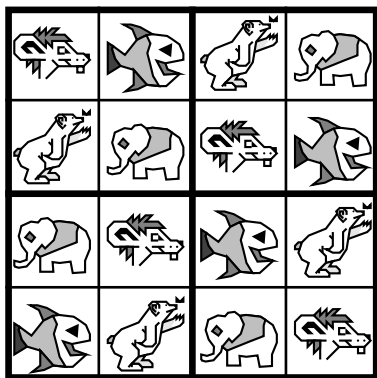
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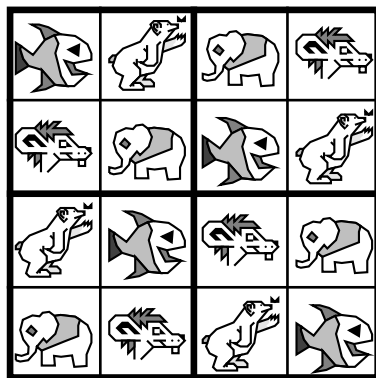




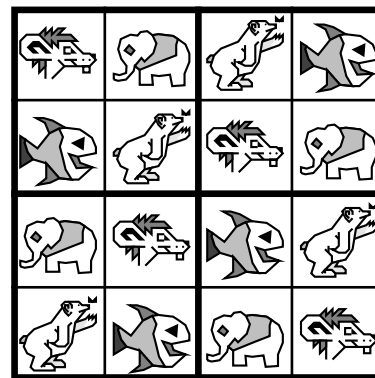
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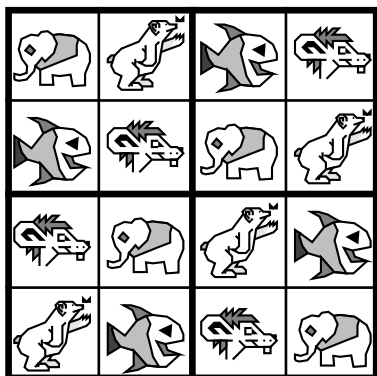
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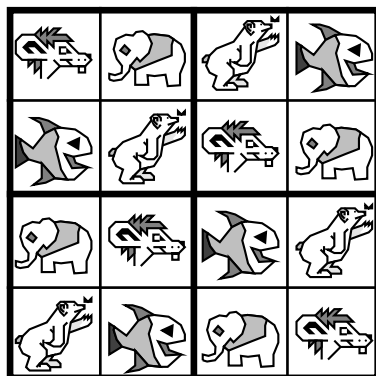
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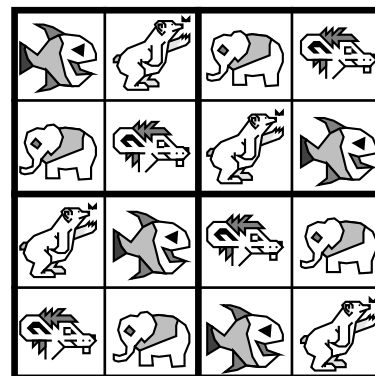
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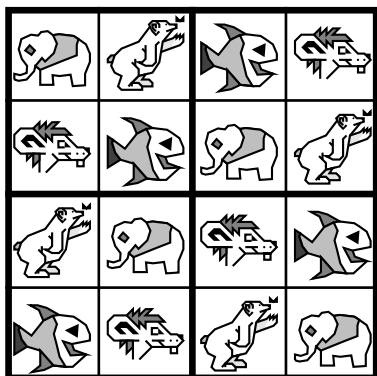
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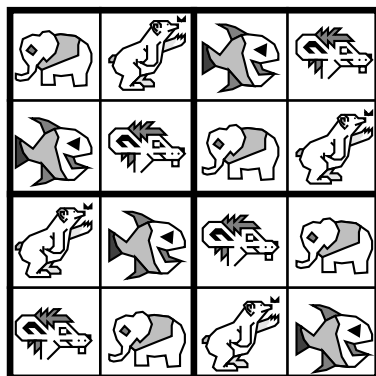
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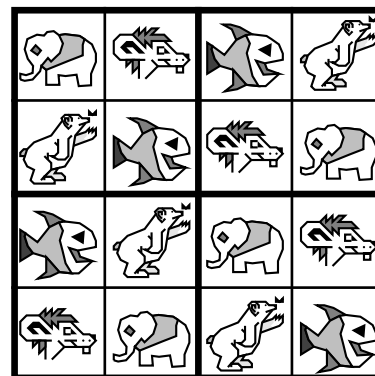
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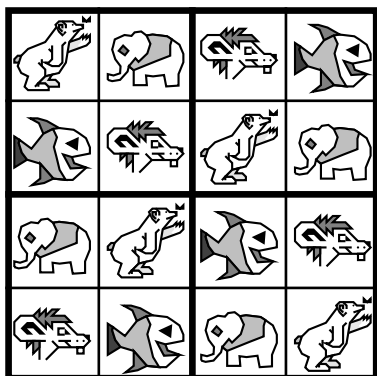
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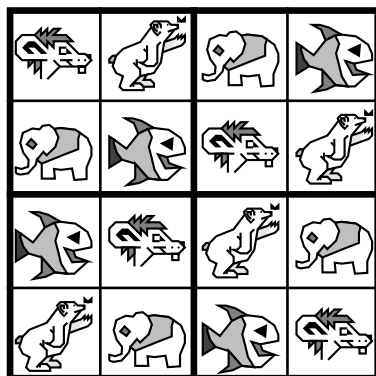
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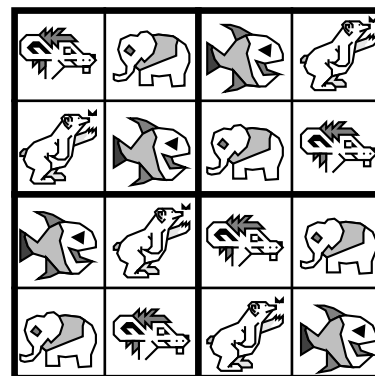
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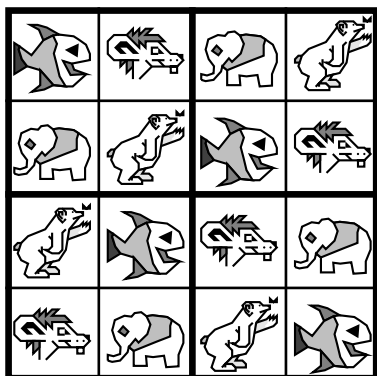
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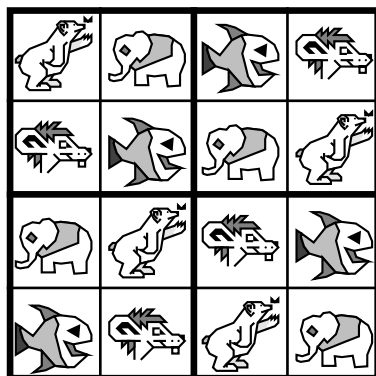
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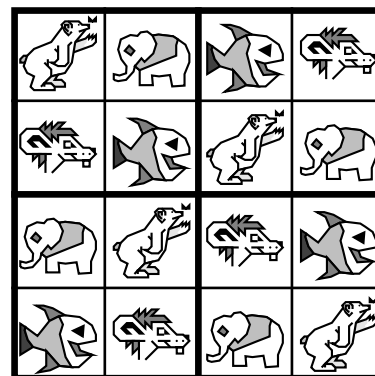
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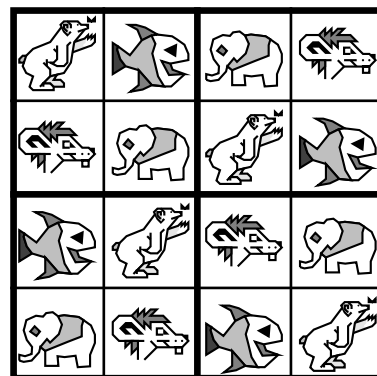
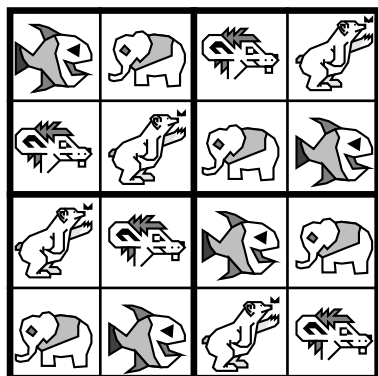
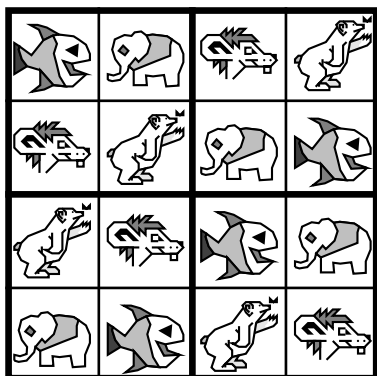
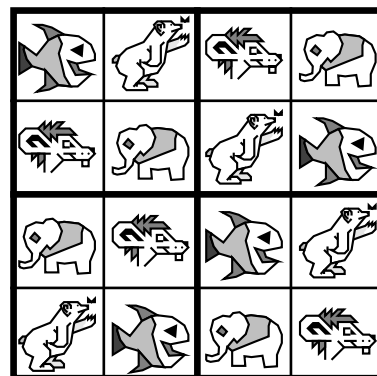
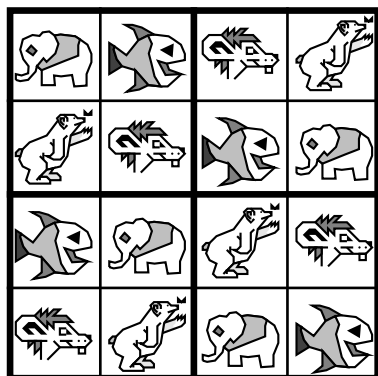
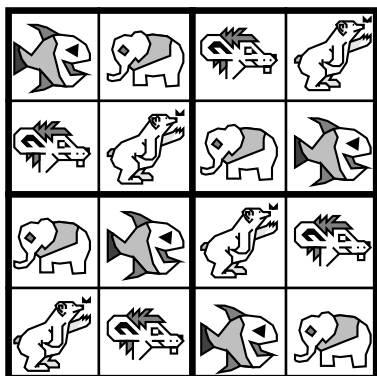
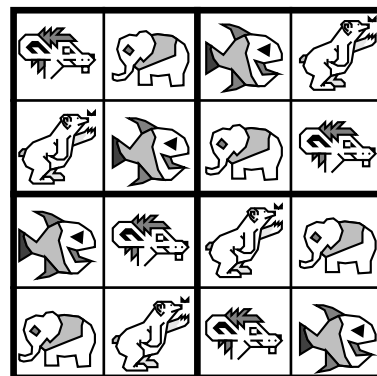
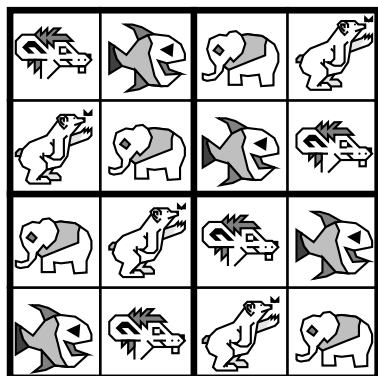
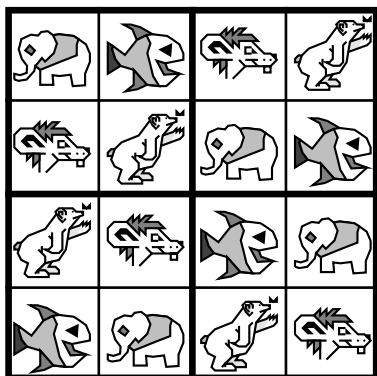
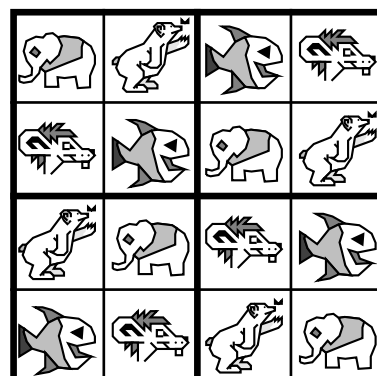
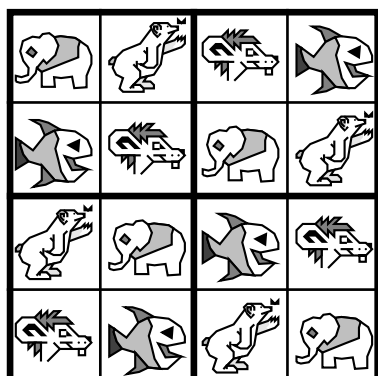
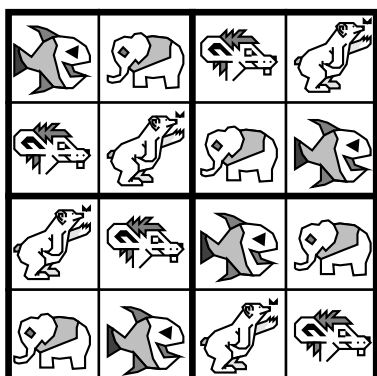
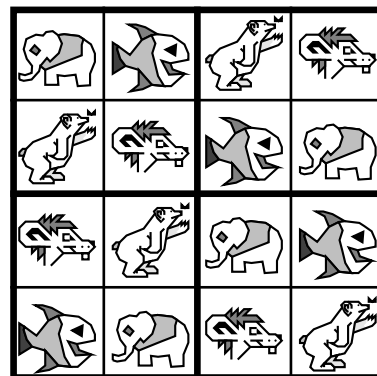
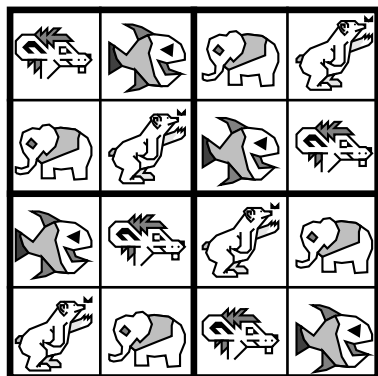
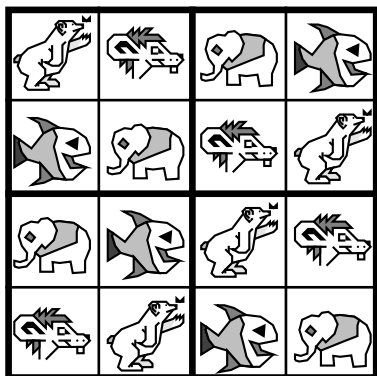


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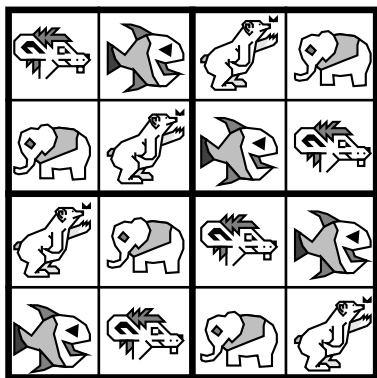


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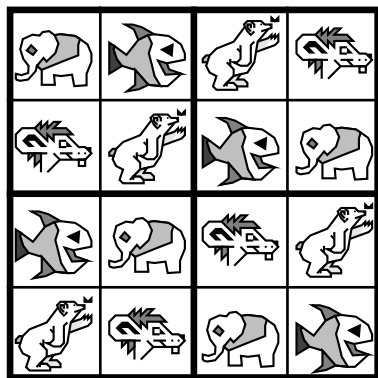




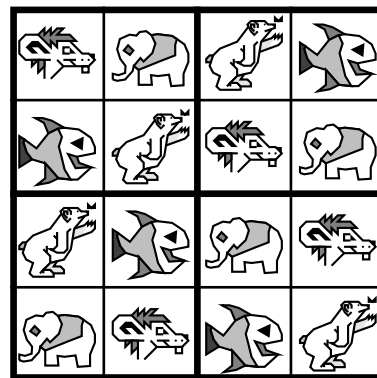
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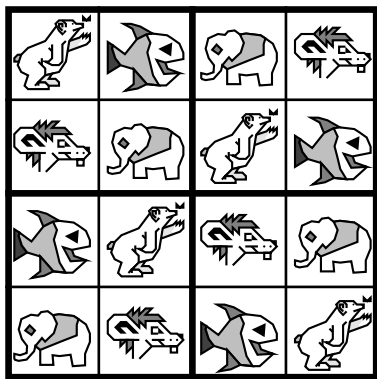
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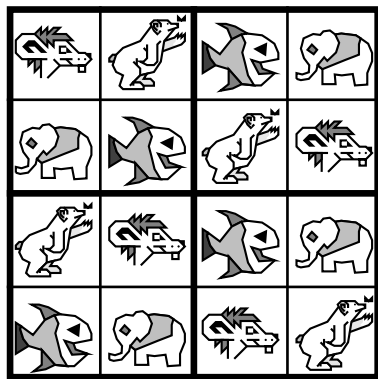
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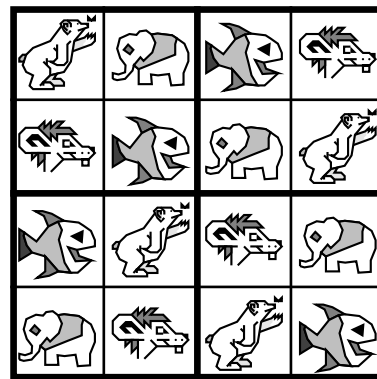
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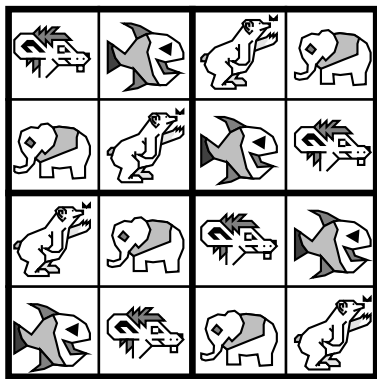
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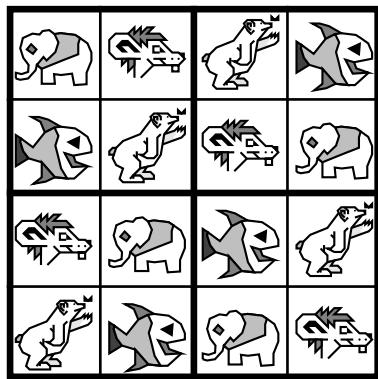
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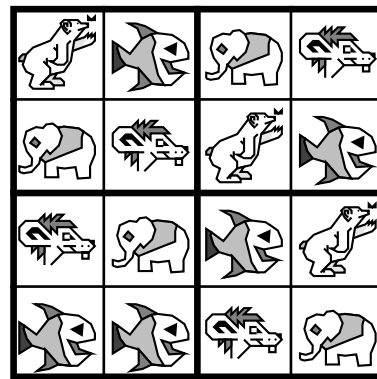
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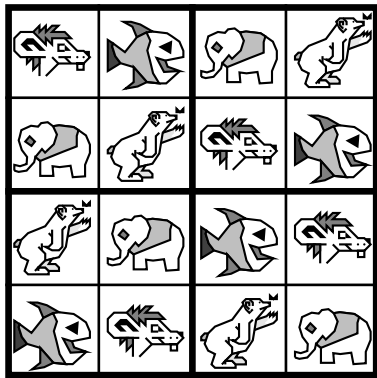
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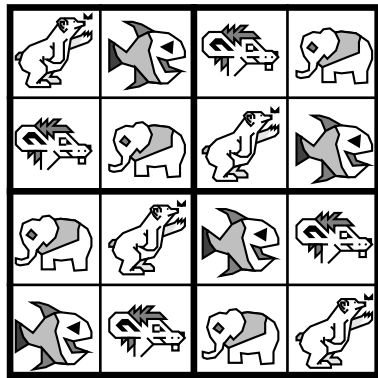
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