

Trabalho 1: DFT, filtragem, segmentação e operações morfológicas

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1 - DFT e IDFT

```
void exercio01() {  
    std::vector<double> input = { 1, 2, 0, 1 };  
    std::vector<double> reconstructed;  
    std::vector<std::array<double, 2>> output;  
  
    showRealVector(input);  
    std::cout << "-----" << std::endl;  
  
    dft(input, output);  
    showComplexVector(output);  
  
    std::cout << "-----" << std::endl;  
    idft(output, reconstructed);  
    showRealVector(reconstructed);  
}
```

1 - DFT e IDFT

X0: 1
X1: 2
X2: 0
X3: 1

Original

X0: 1 0
X1: 0.25 0.25
X2: -0.5 1.53081e-16
X3: 0.25 -0.25

DFT

X0: 1
X1: 2
X2: -1.16743e-16
X3: 1

IDFT

1 - DFT e IDFT

X0: 1

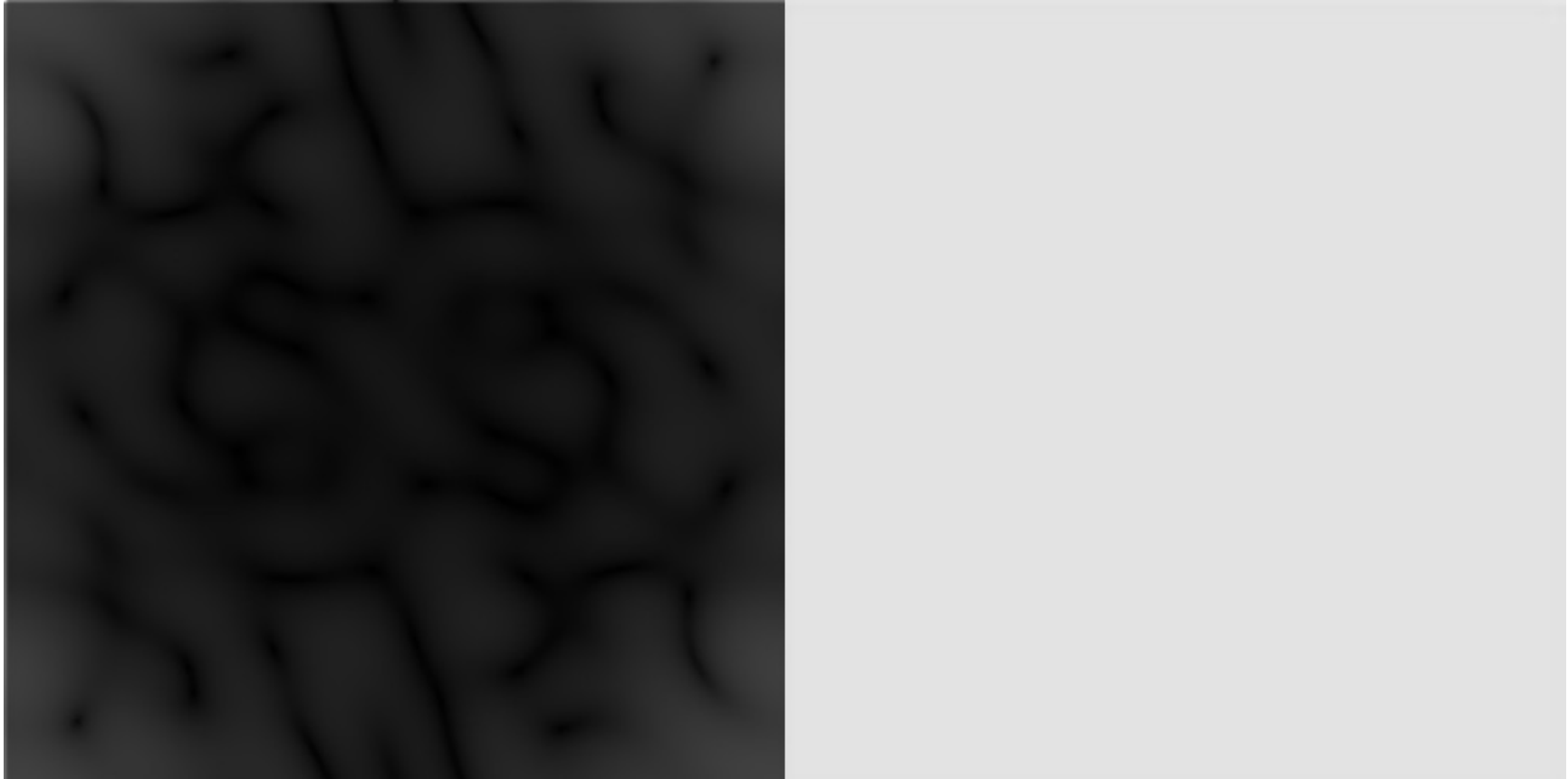
X1: 0.353553

X2: 0.5

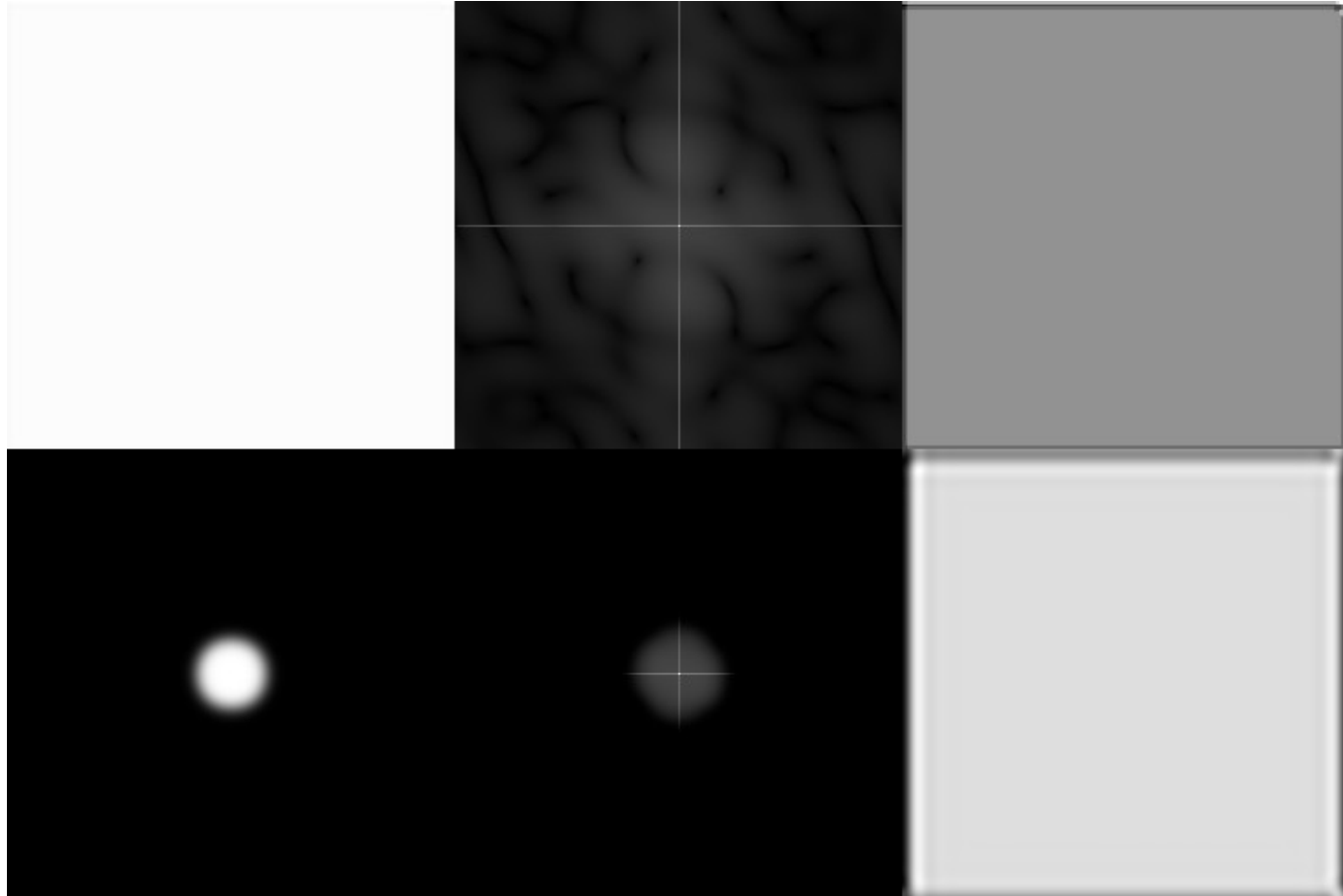
X3: 0.353553

← Magnitude

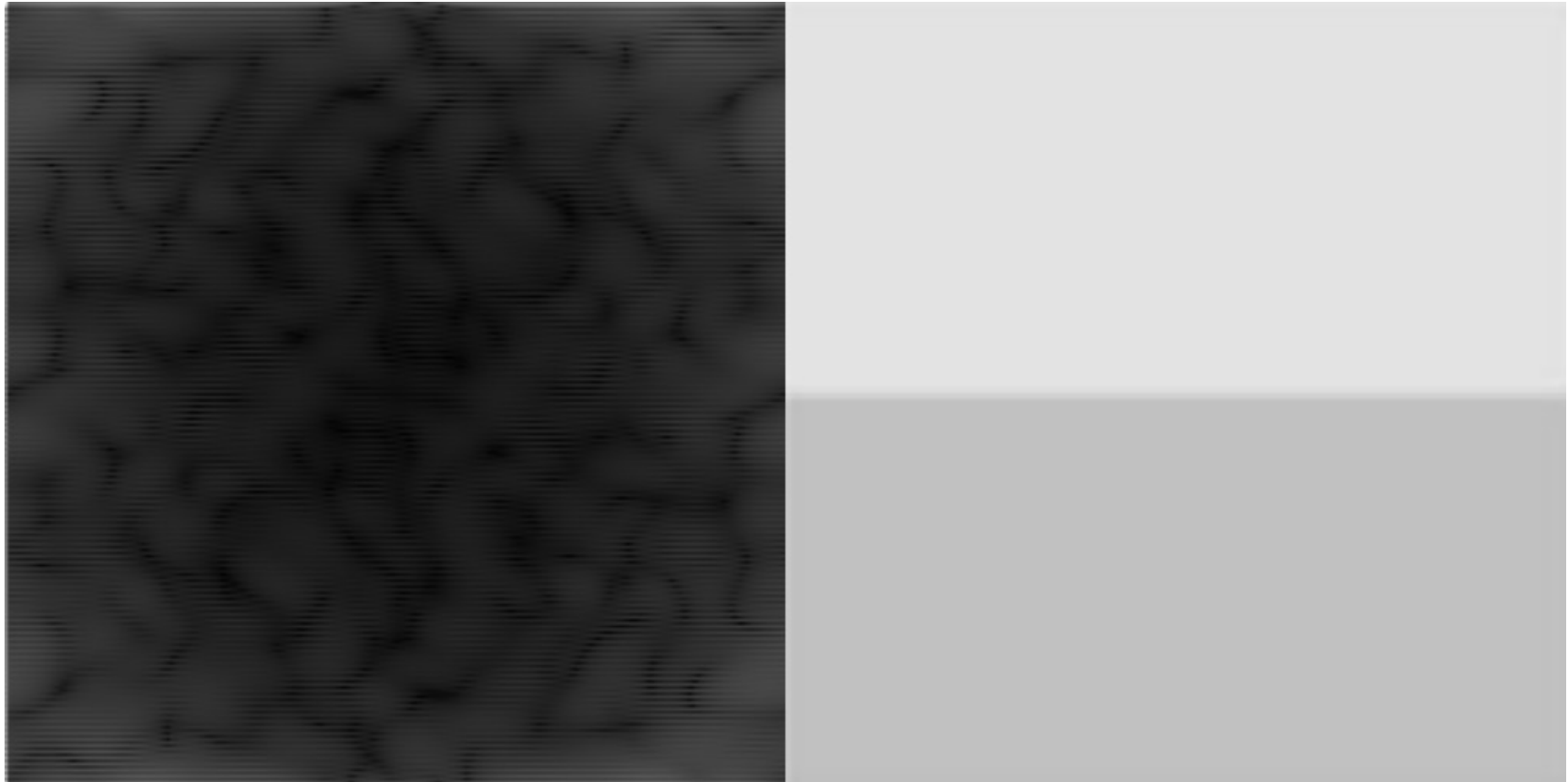
2 – DFT, Máscara e IDFT – Img1



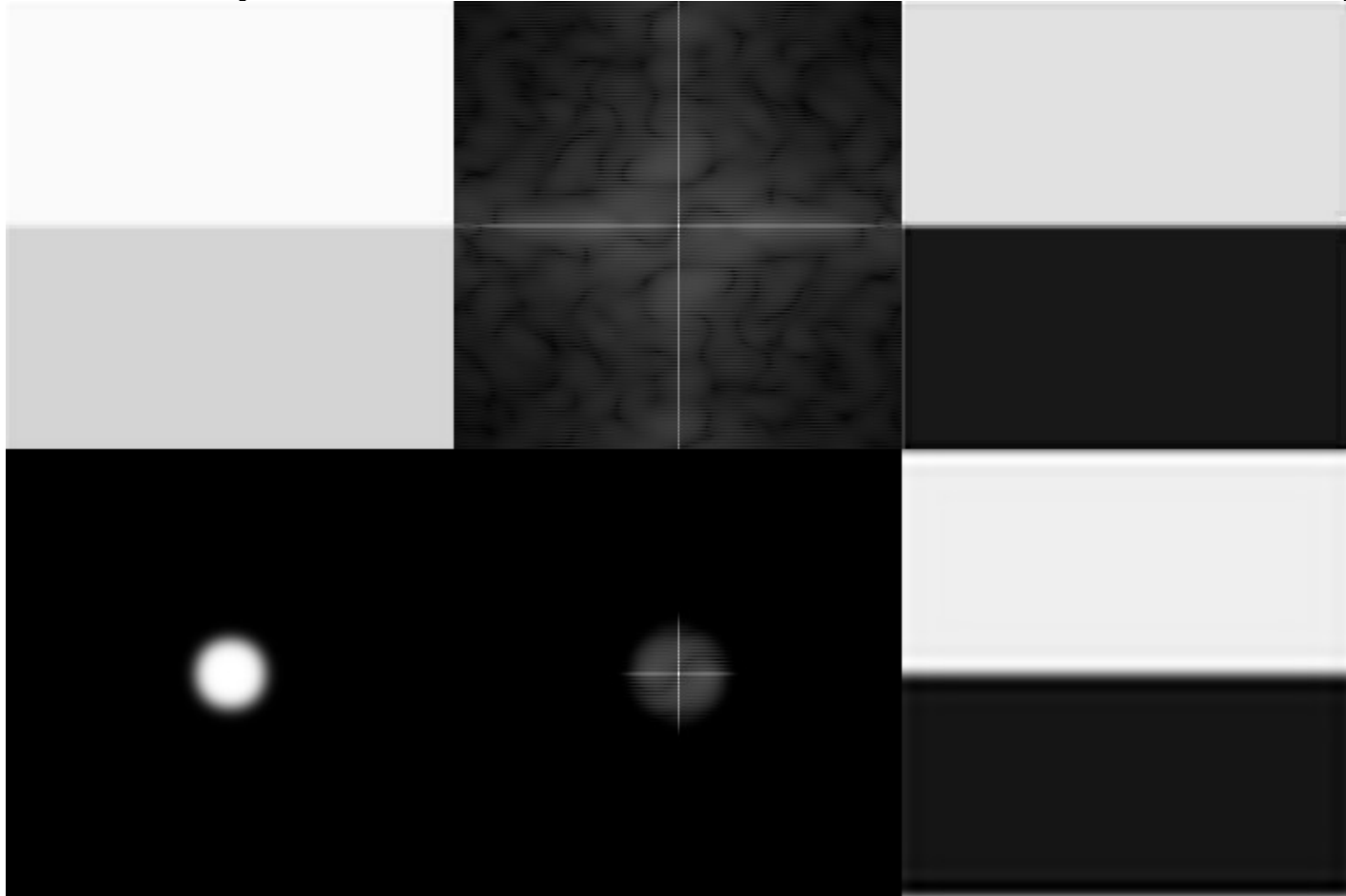
2 – DFT, Máscara e IDFT – Img1



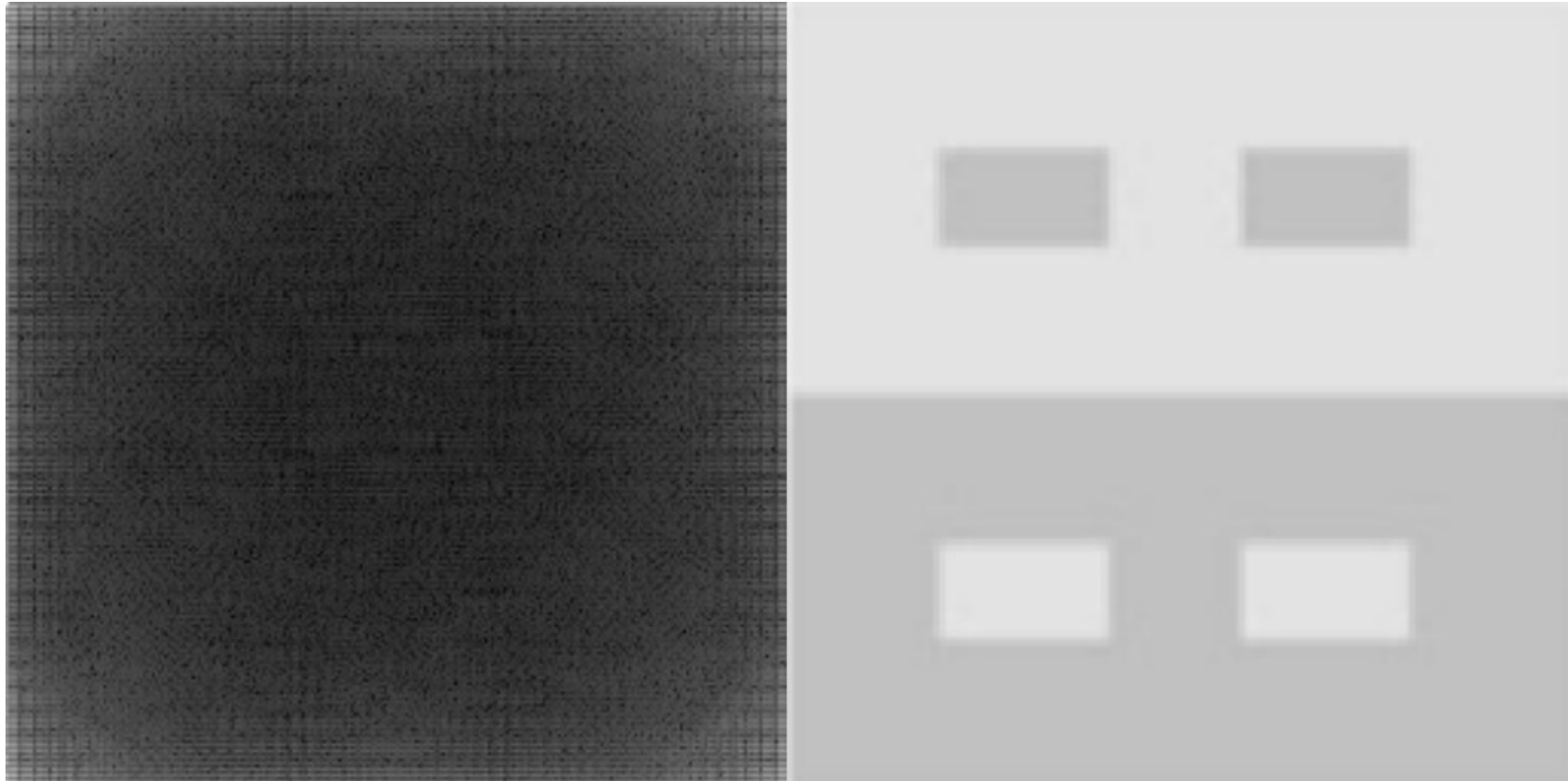
2 – DFT, Máscara e IDFT – Img2



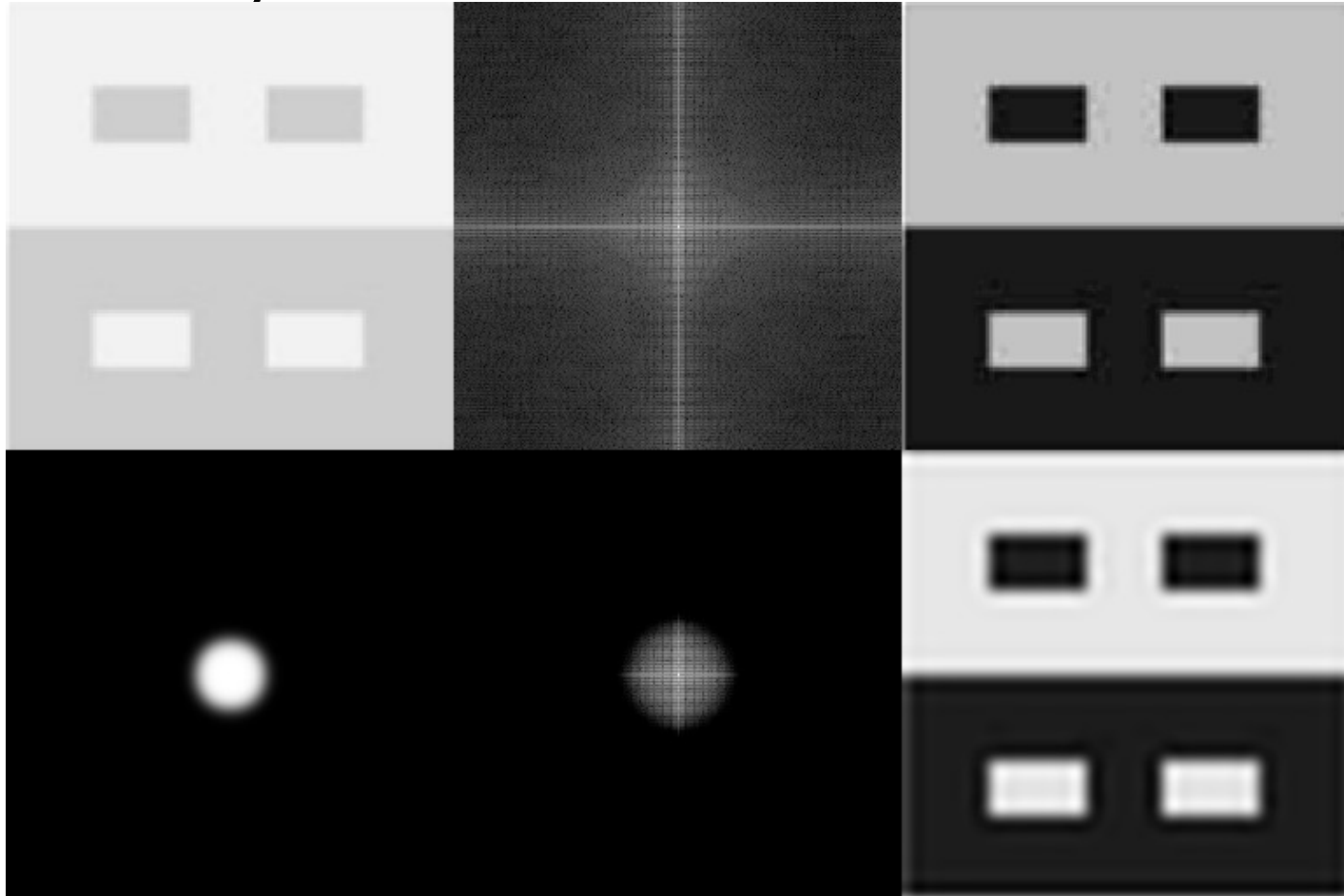
2 – DFT, Máscara e IDFT – Img2



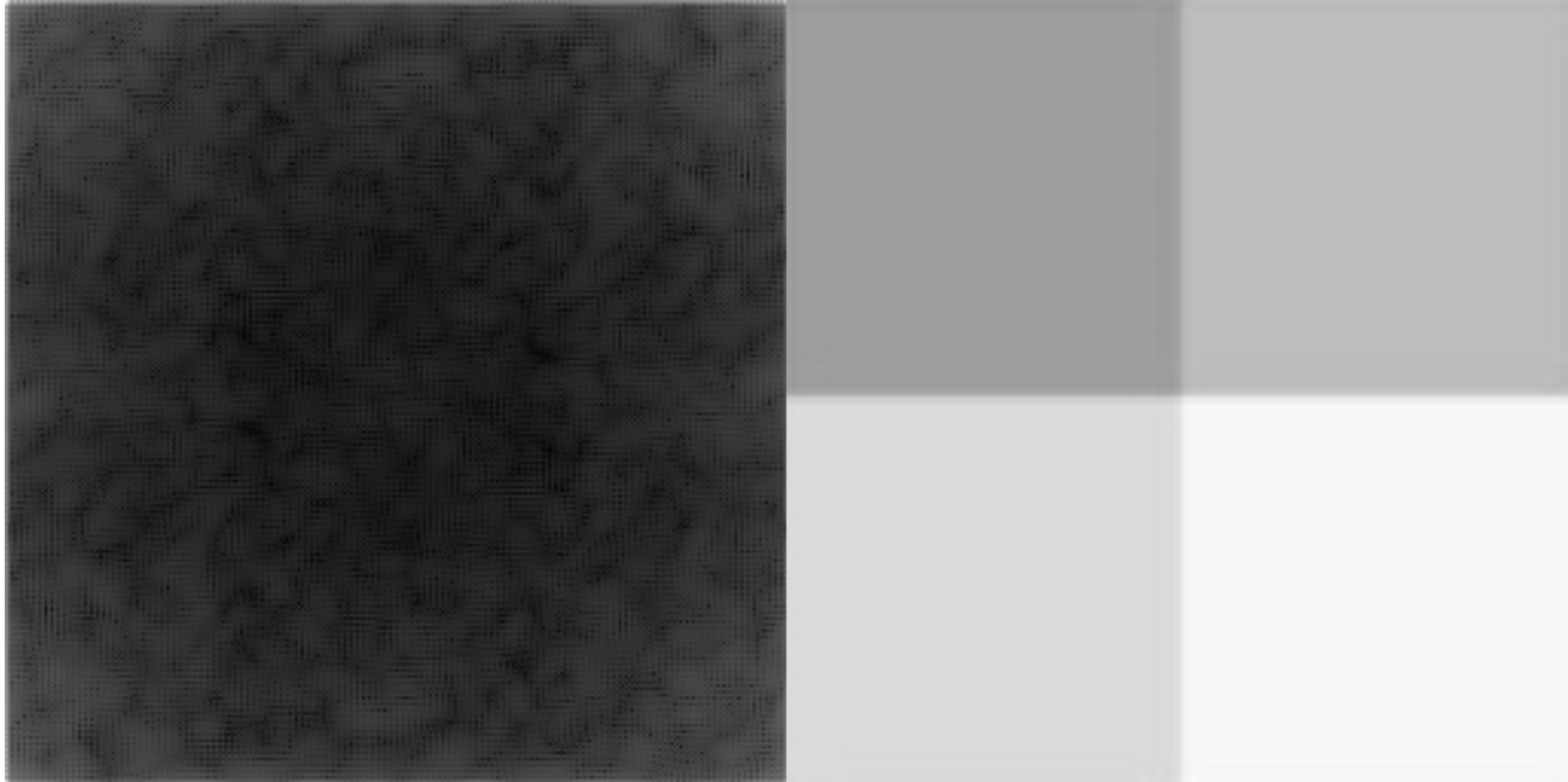
2 – DFT, Máscara e IDFT – Img3



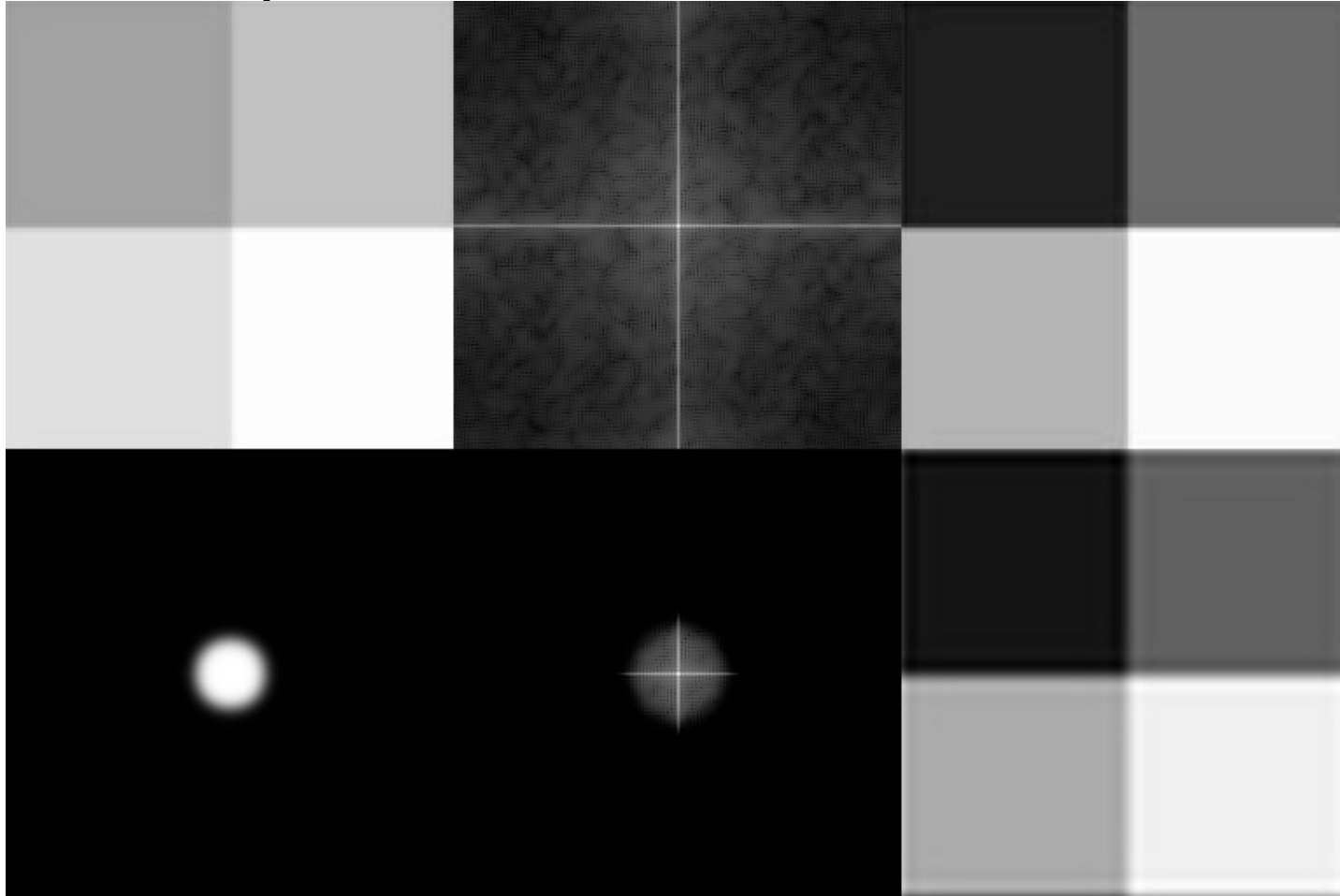
2 – DFT, Máscara e IDFT – Img3



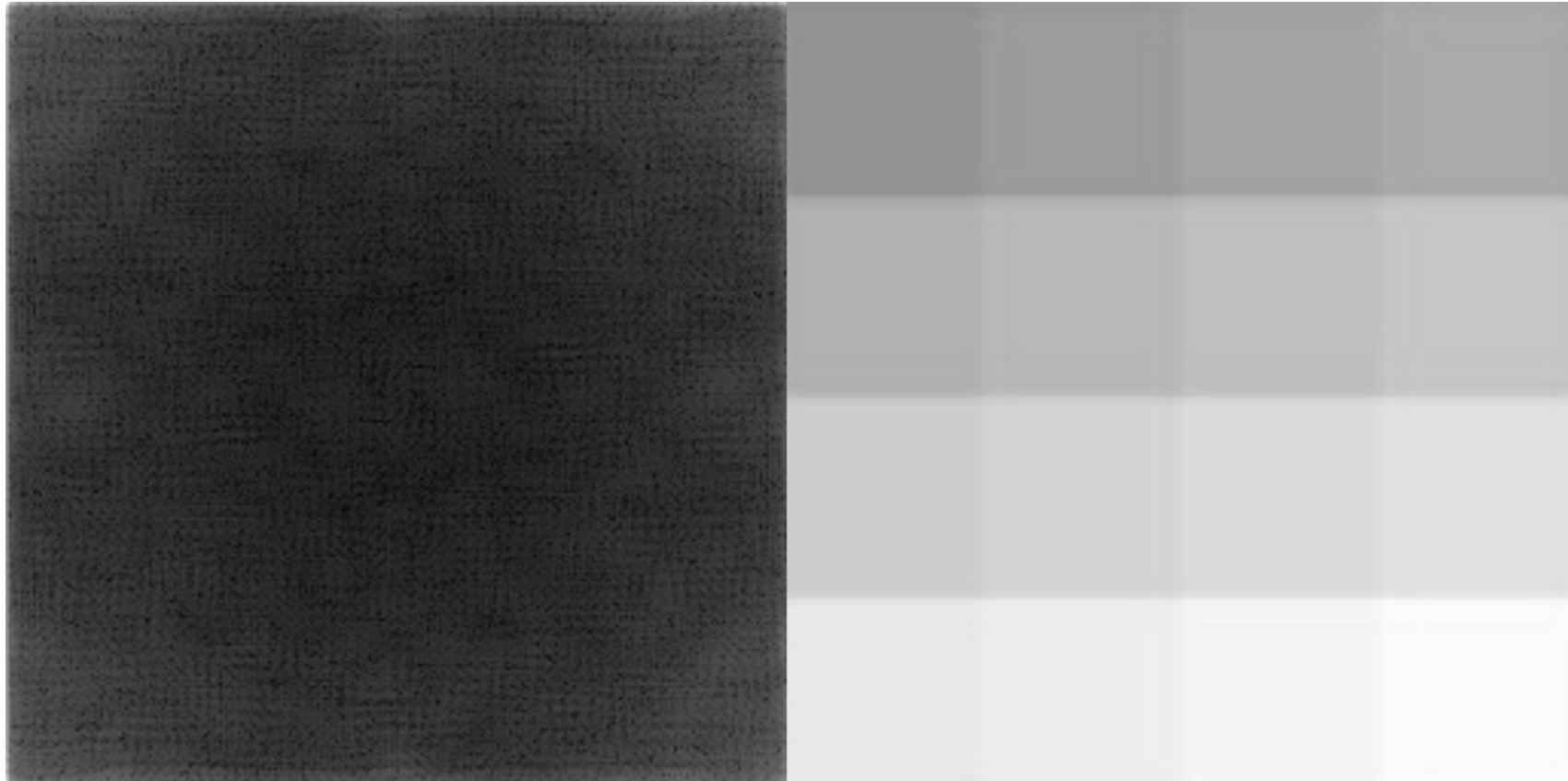
2 – DFT, Máscara e IDFT – Img4



2 – DFT, Máscara e IDFT – Img4



2 – DFT, Máscara e IDFT – Img5



2 – DFT, Máscara e IDFT – Img5

