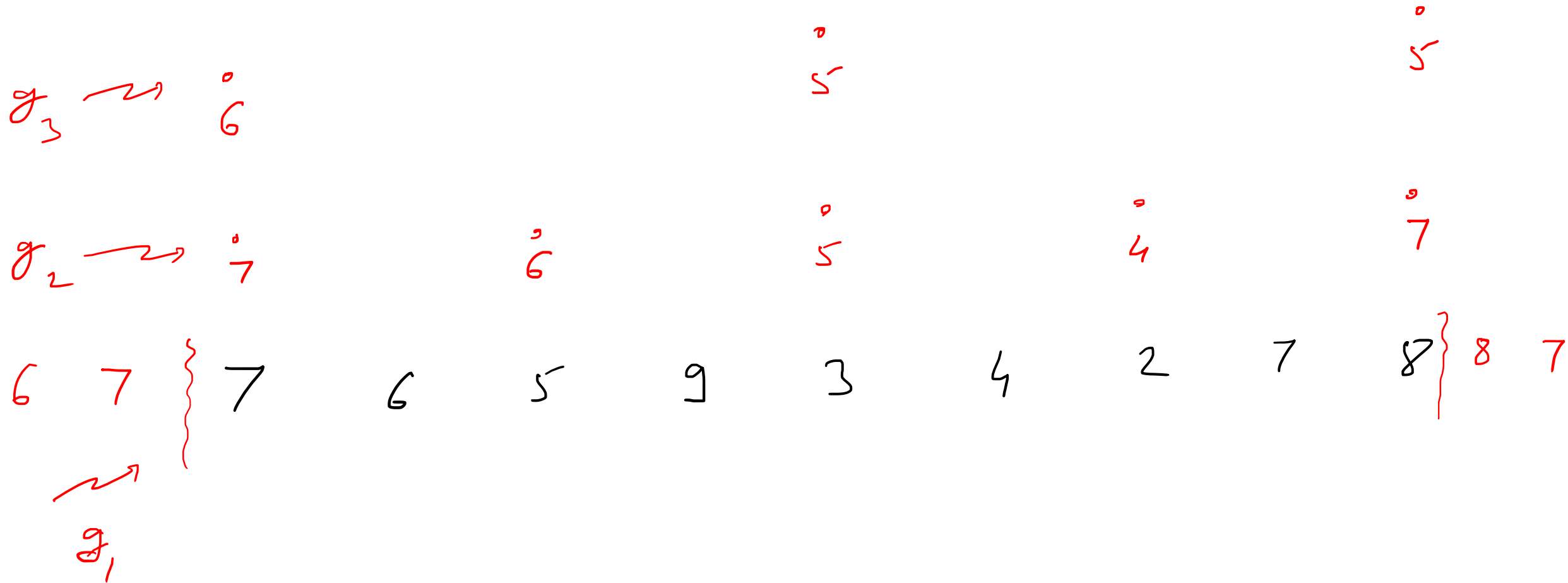


# Gaussian Pyramid (Compression)



[ 0.05   0.25   0.4   0.25   0.05 ]

# Gaussian Pyramid (Expression)

$$g_3 = 0$$

$$5$$

$$5$$

$$Expension [g_3] = 0$$

$$3$$

$$3$$

$$3$$

$$2$$

$$Expension [g_2] = 0$$

$$1$$

$$2$$

$$2$$

$$2$$

$$2$$

$$2$$

$$1$$

$$1$$

$$1$$

# Laplacian Pyramid (Compression)

$$L_3 = g_3$$

<sup>0</sup>  
6

<sup>0</sup>  
5

<sup>0</sup>  
5

$$L_2 = g_2 - \text{Expansion}[g_3]$$

<sup>0</sup>                      <sup>0</sup>  
4                      3

<sup>0</sup>  
2

<sup>0</sup>  
1

<sup>0</sup>  
5

$$L_1 = g_1 - \text{Expansion}[g_2]$$

<sup>0</sup>            <sup>0</sup>            <sup>0</sup>  
6            4            3

<sup>0</sup>  
7

<sup>0</sup>  
1

<sup>0</sup>  
2

<sup>0</sup>  
1

<sup>0</sup>  
6

<sup>0</sup>  
7

# Laplacian Pyramid (Expansion)

$$g_3 = L_3$$

|   |   |   |
|---|---|---|
| 0 | 0 | 0 |
| 6 | 5 | 5 |

$$g_2 = \text{Expansion}[g_3] + L_2$$

|   |   |   |   |
|---|---|---|---|
| 0 | 0 | 0 | 0 |
| 7 | 6 | 5 | 4 |
|   |   |   | 7 |

$$g_1 = \text{Expansion}[g_2] + L_1$$

|   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 6 | 5 | 9 | 3 | 4 | 2 | 7 |
|   |   |   |   |   |   |   | 8 |