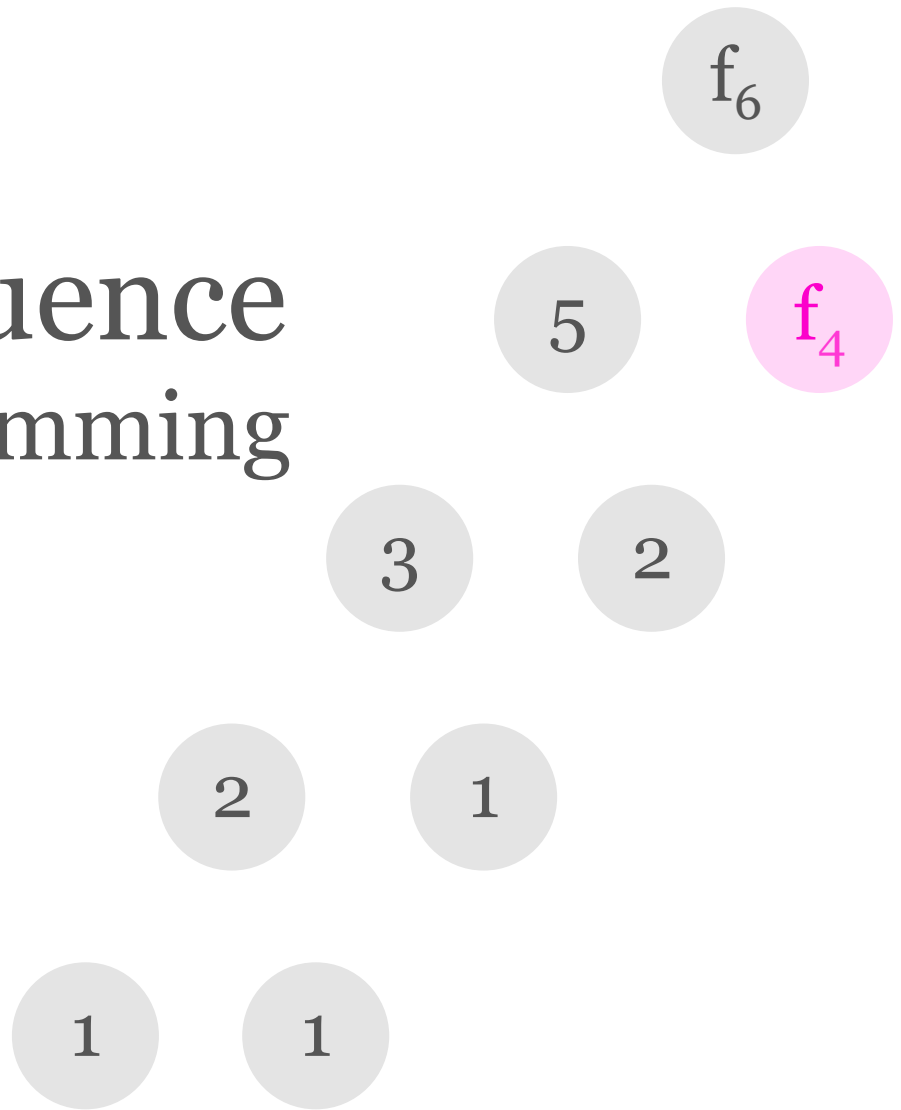


Fibonacci Sequence

by dynamic programming



fib(6):

```
    if n in m:
        return m[n]
    if n ≤ 2:
        return 1
    f = fib(n-1)+fib(n-2)
    m[n] = f
    return f
```

f_6

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```

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```

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        return m[n]
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    if n ≤ 2
```

```
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    m[n] = f
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f_6

fib(5):

```
    if n in m
```

```
        return m[n]
```

```
    if n ≤ 2
```

```
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```

```
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```
    m[n] = f
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```
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f_6

f_5

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f_6

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f_6

f_5

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f_4

f_5

f_6

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f_5

f_6

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f_3

f_4

f_5

f_6

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f_6

f_5

f_4

f_3

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f_6

f_5

f_4

f_3

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f_2

f_3

f_4

f_5

f_6

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f_2

f_3

f_4

f_5

f_6

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f_6

f_5

f_4

f_3

1

fib(3):

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    f = fib(n-1)+fib(n-2)
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    m[n] = f
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    return f
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f_6

f_5

f_4

f_3

1

fib(1):

```
    if n in m
```

```
        return m[n]
```

```
    if n ≤ 2
```

```
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```

```
    f = fib(n-1)+fib(n-2)
```

```
    m[n] = f
```

```
    return f
```

f_6

f_5

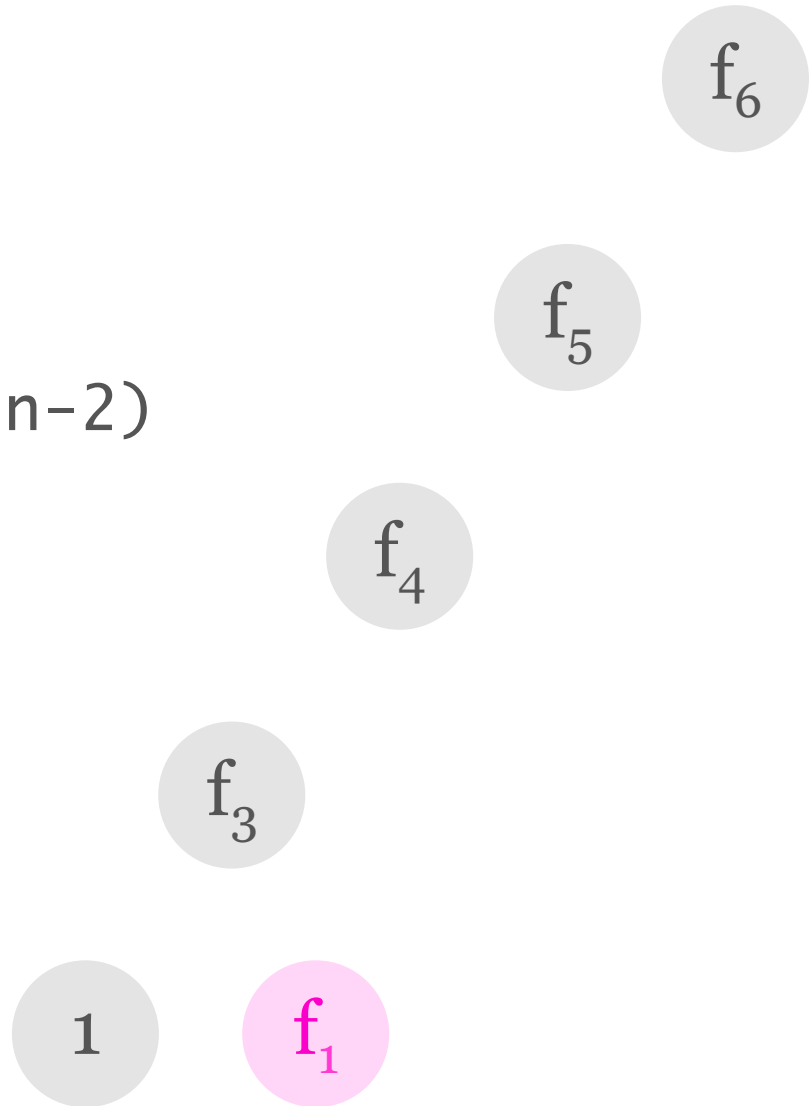
f_4

f_3

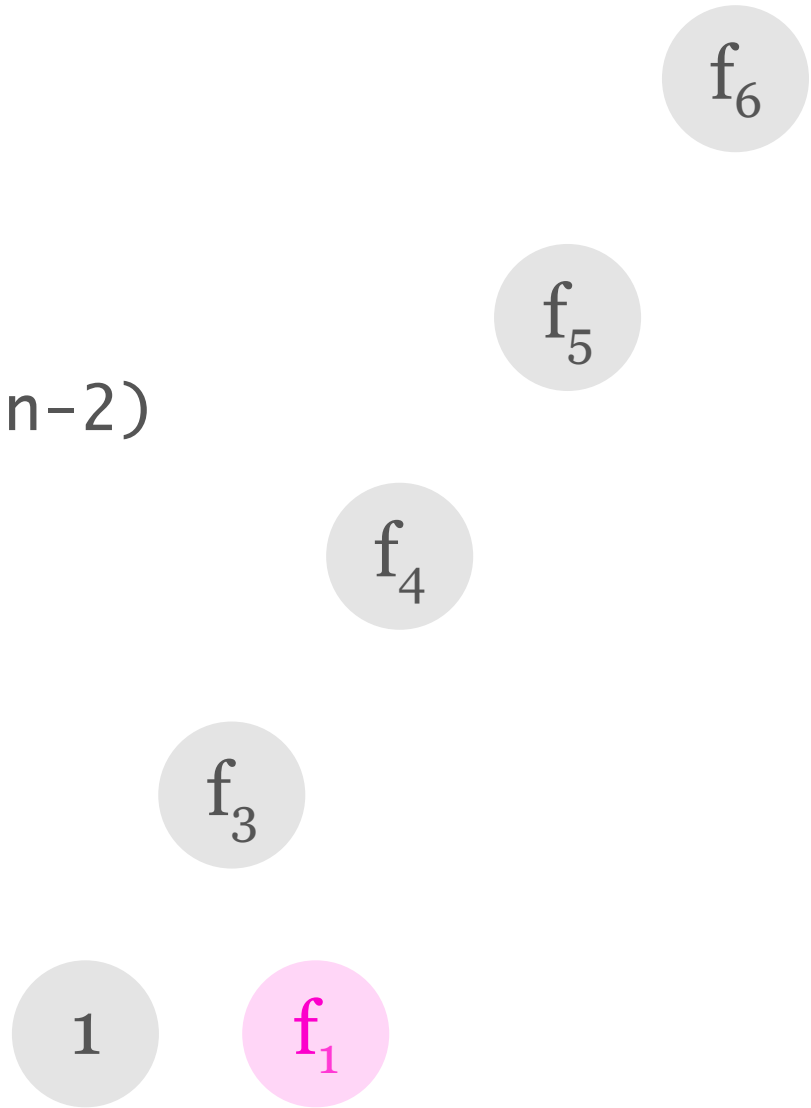
1

f_1

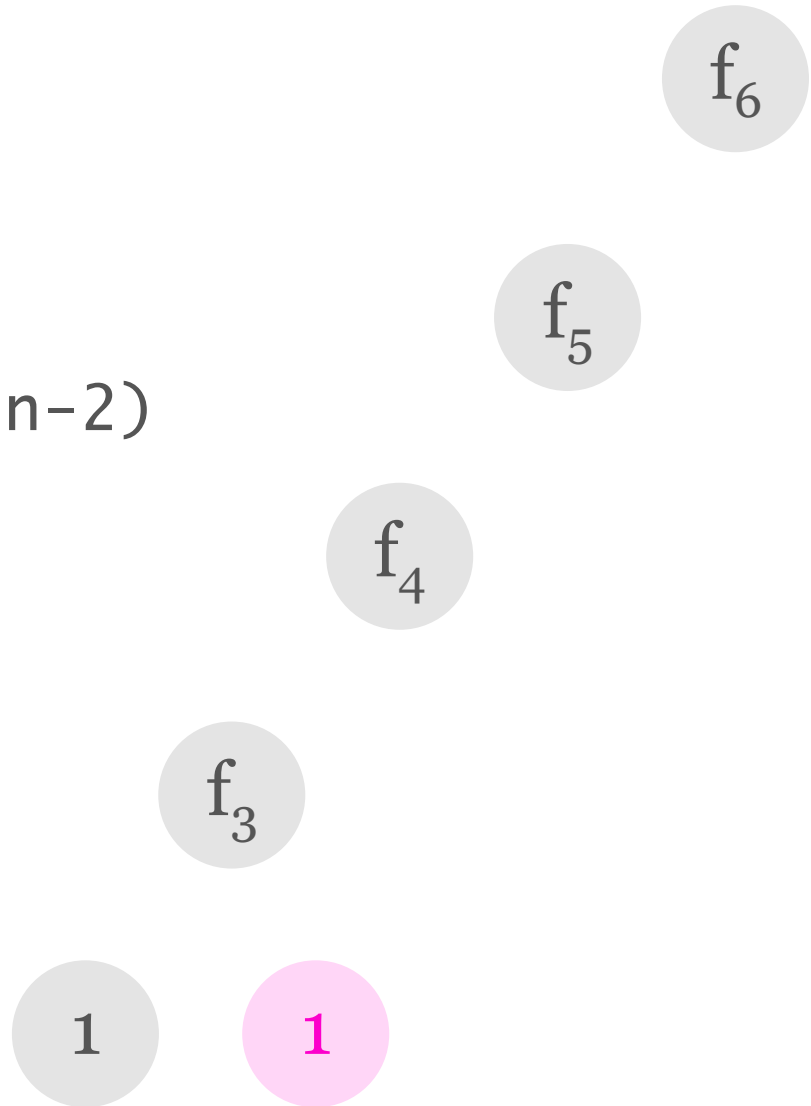
```
fib(1):  
    if n in m  
        return m[n]  
    if n ≤ 2  
        return 1  
    f = fib(n-1)+fib(n-2)  
    m[n] = f  
    return f
```



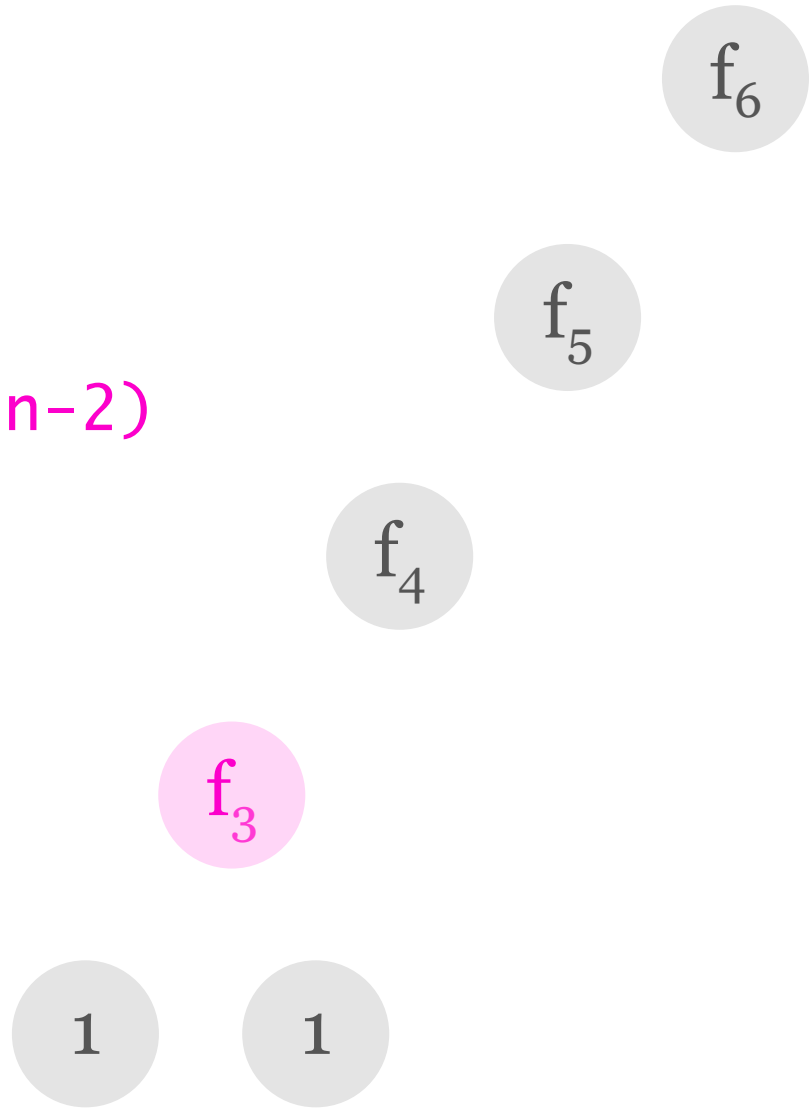
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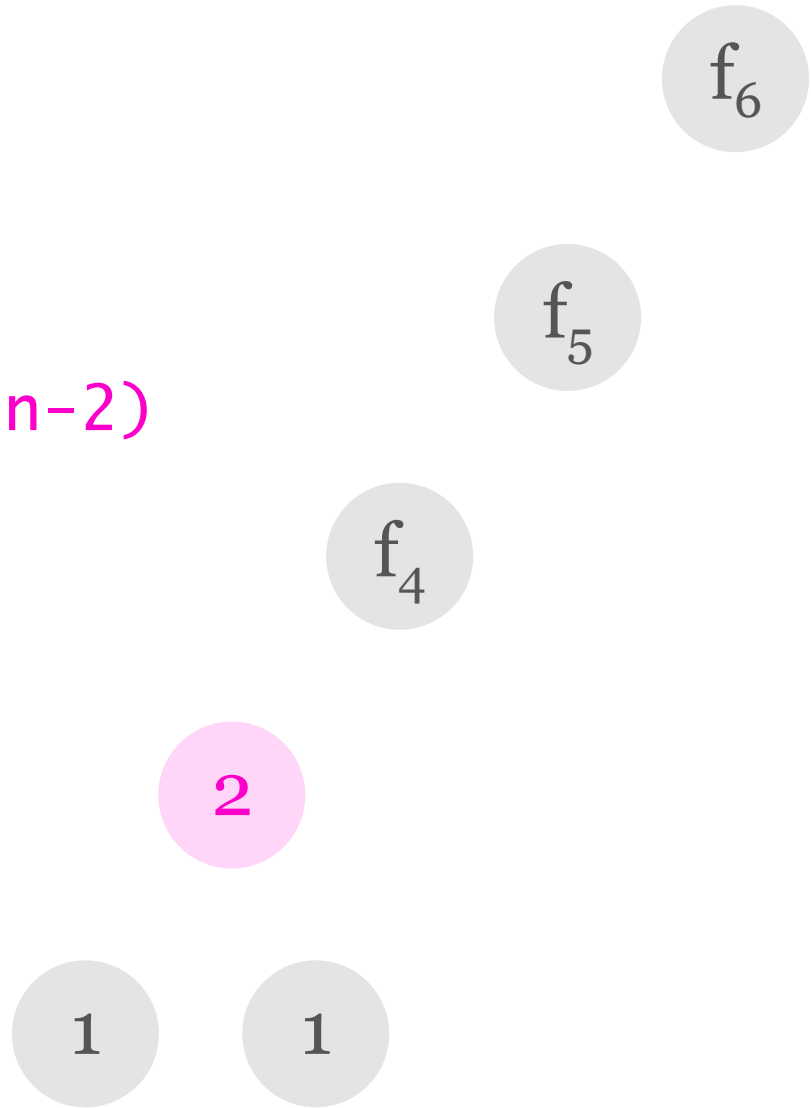
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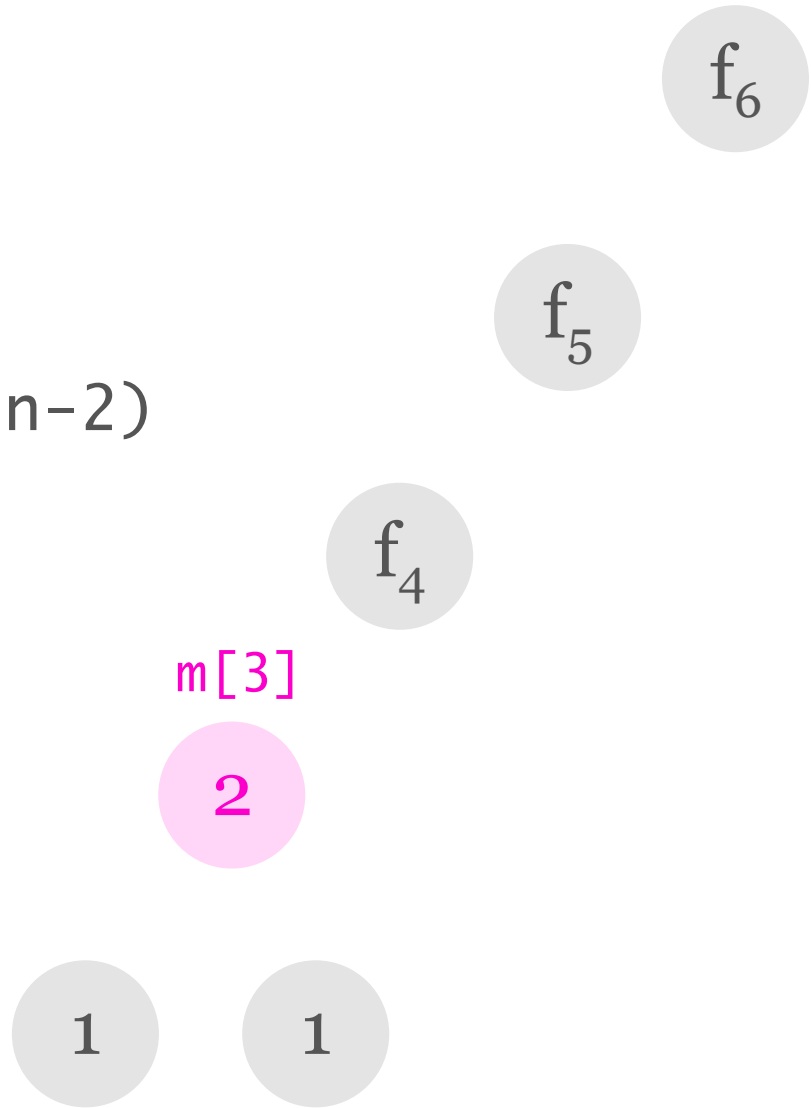

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fib(3):  
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    if n ≤ 2  
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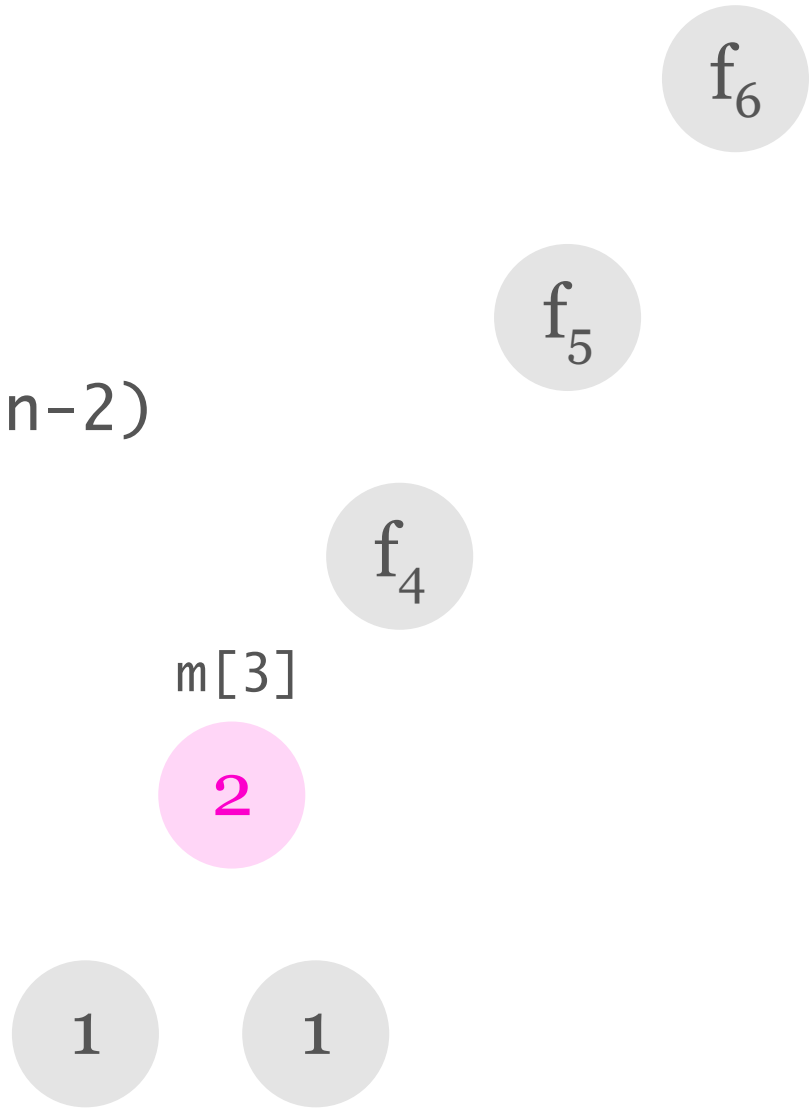
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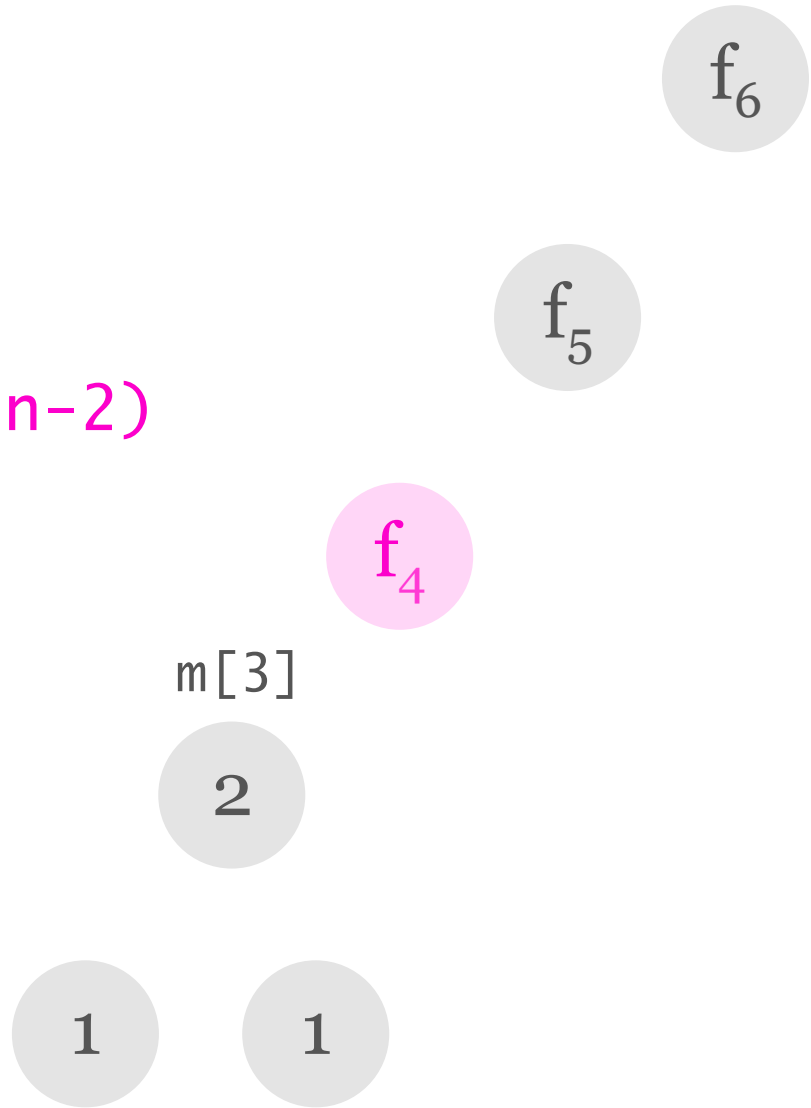
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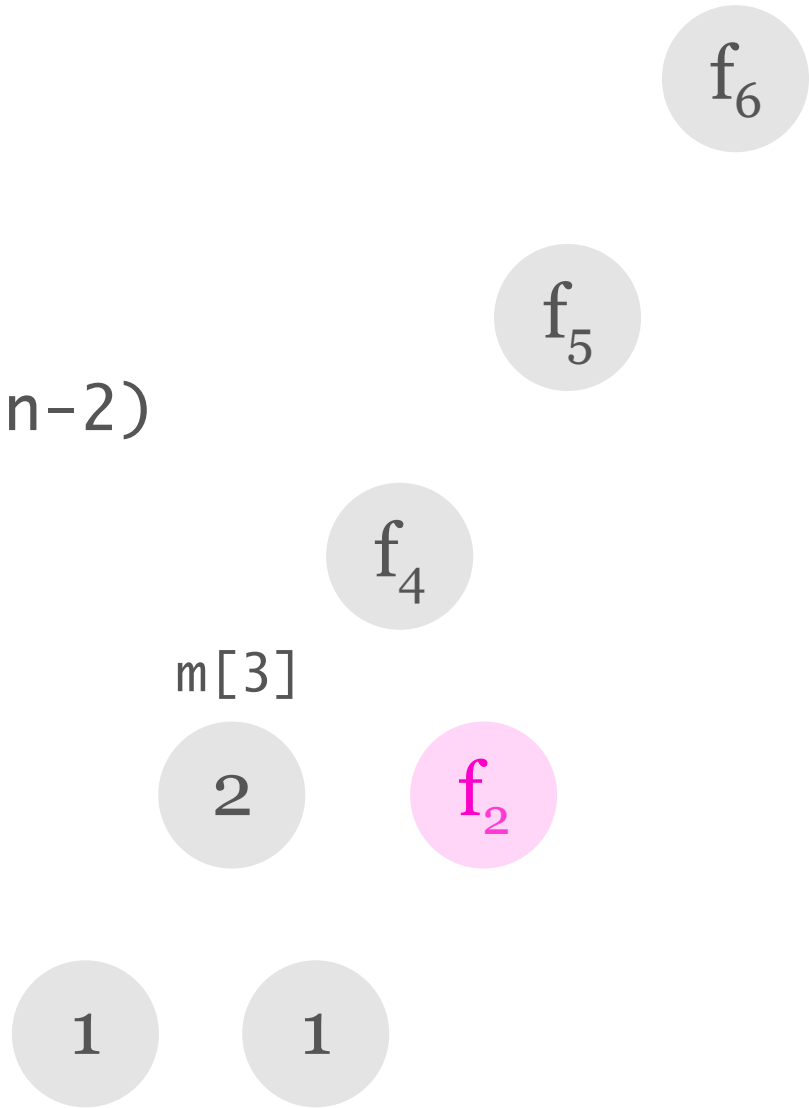
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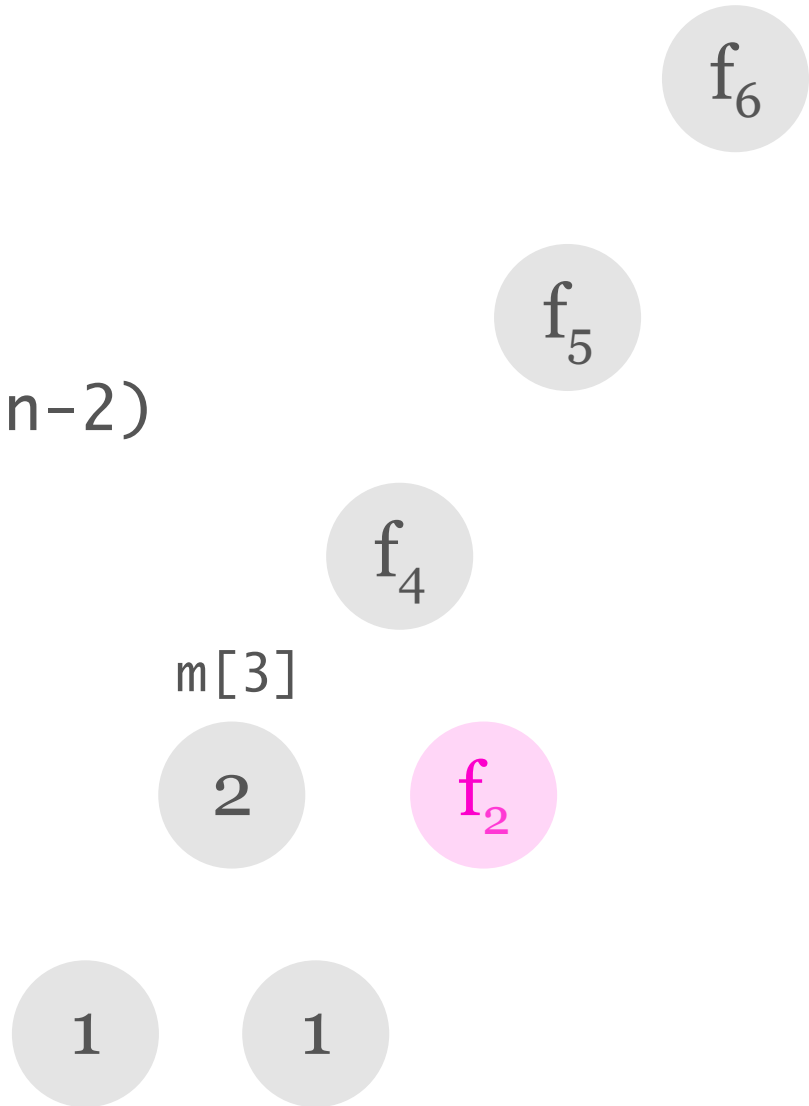
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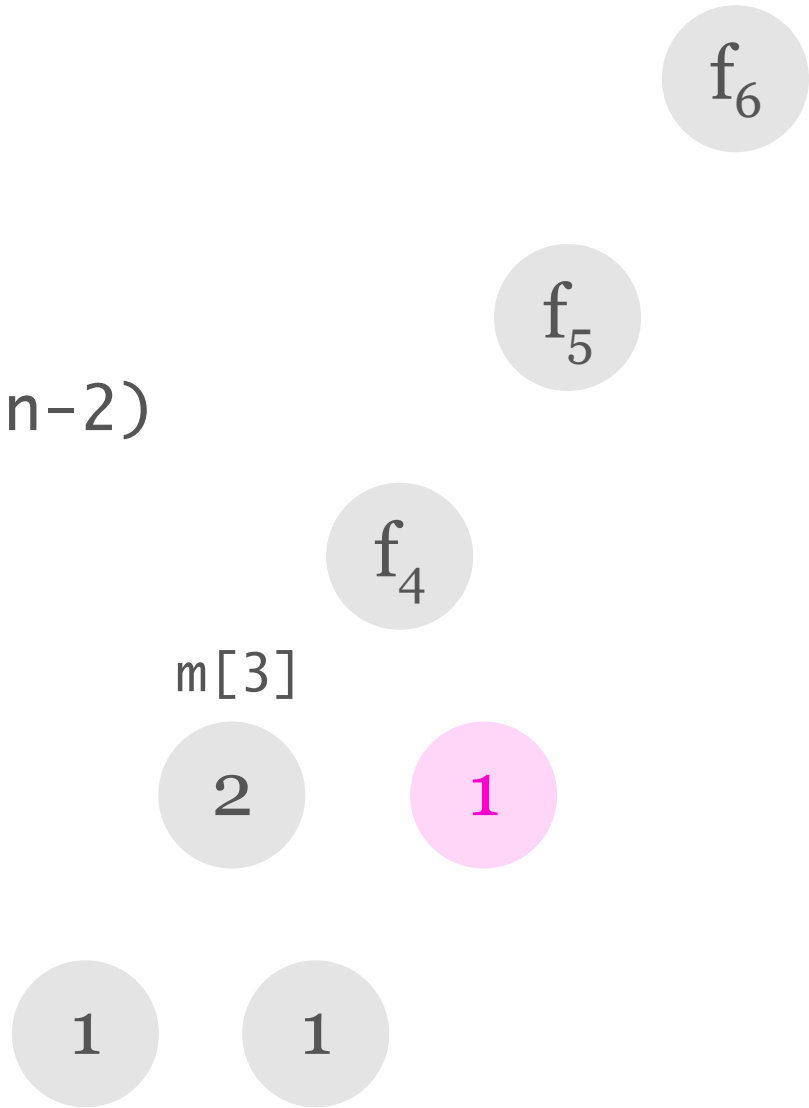
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fib(2):  
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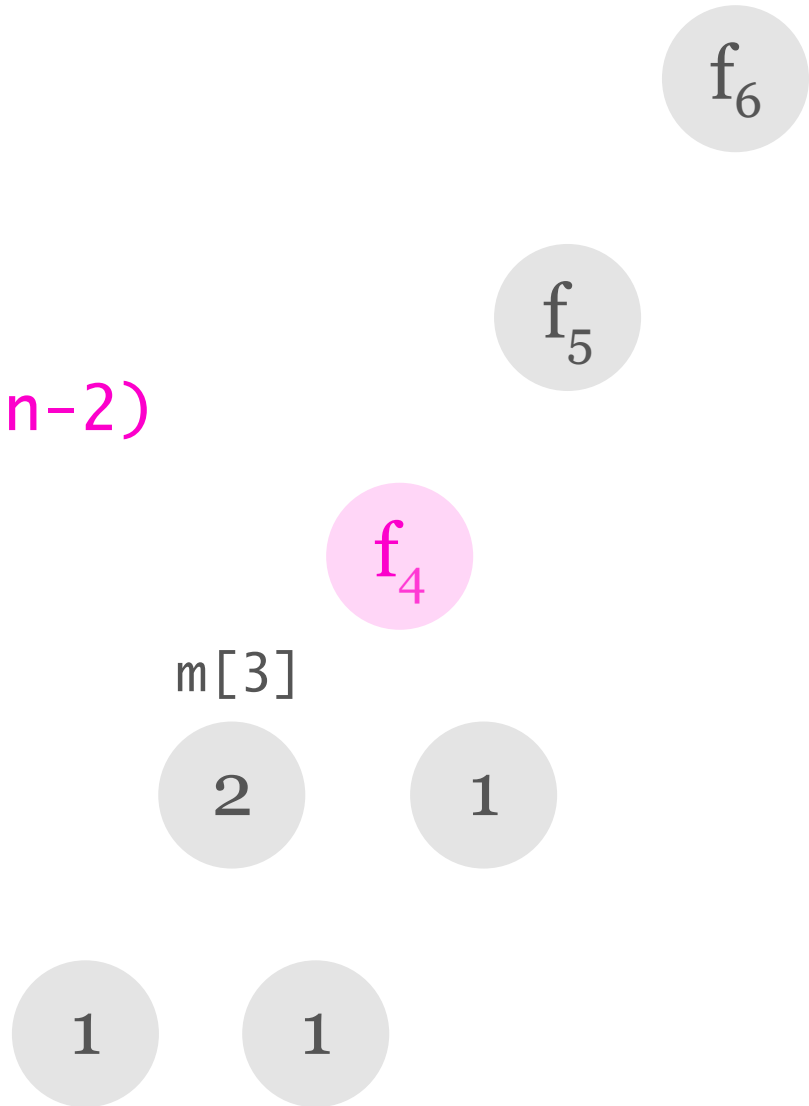
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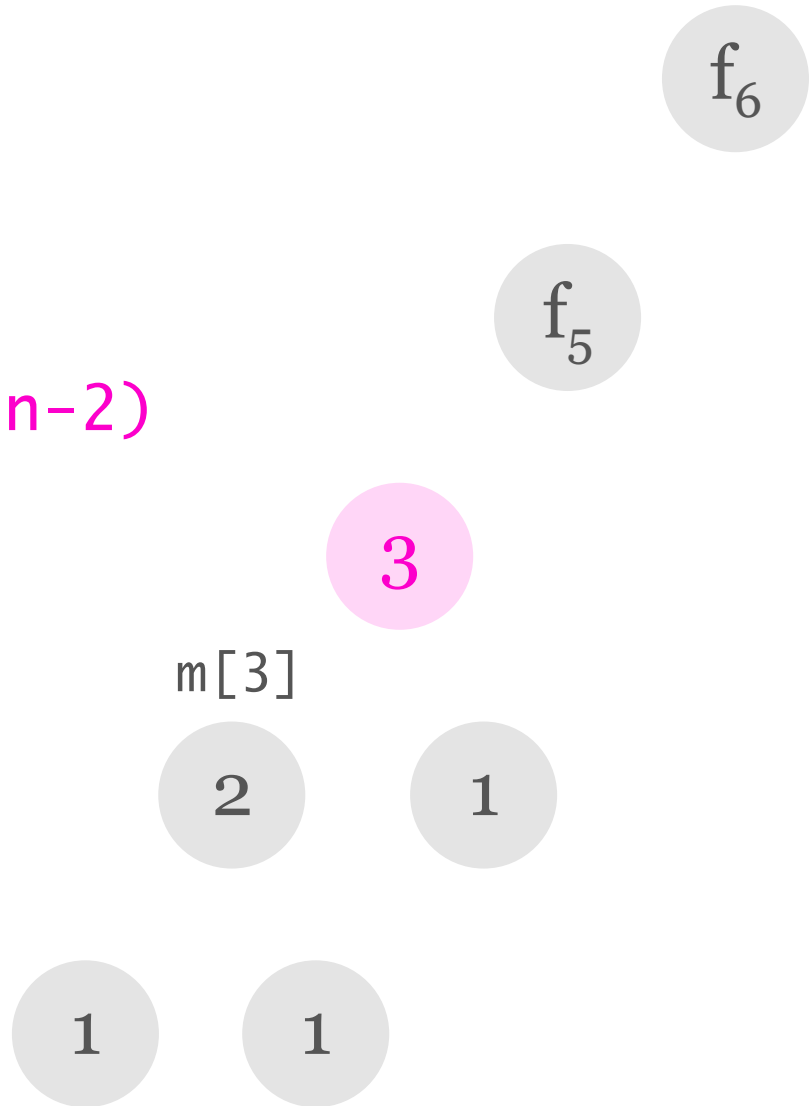
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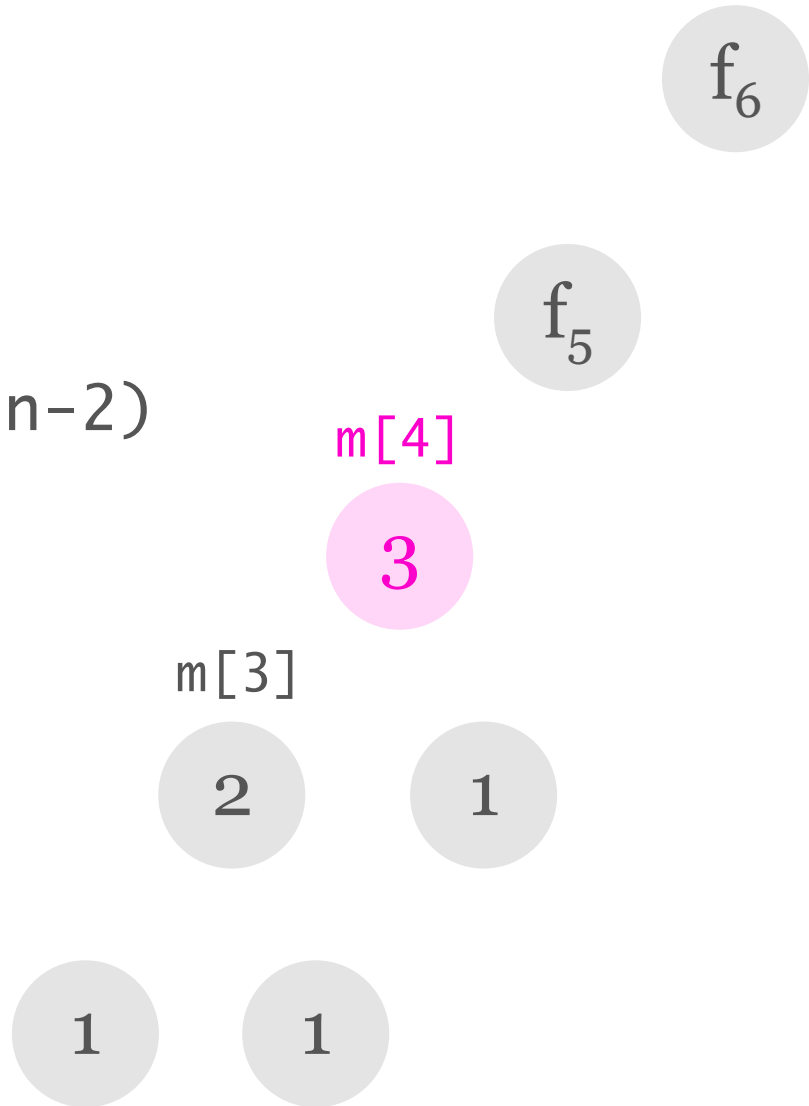

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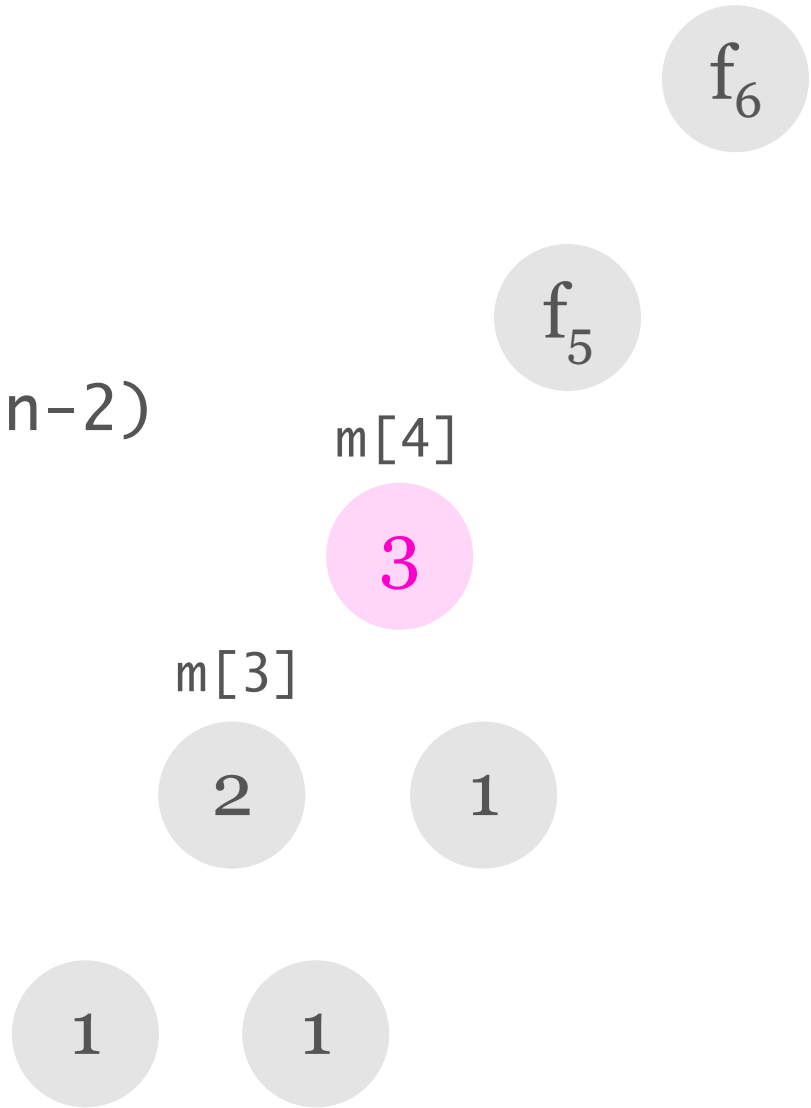
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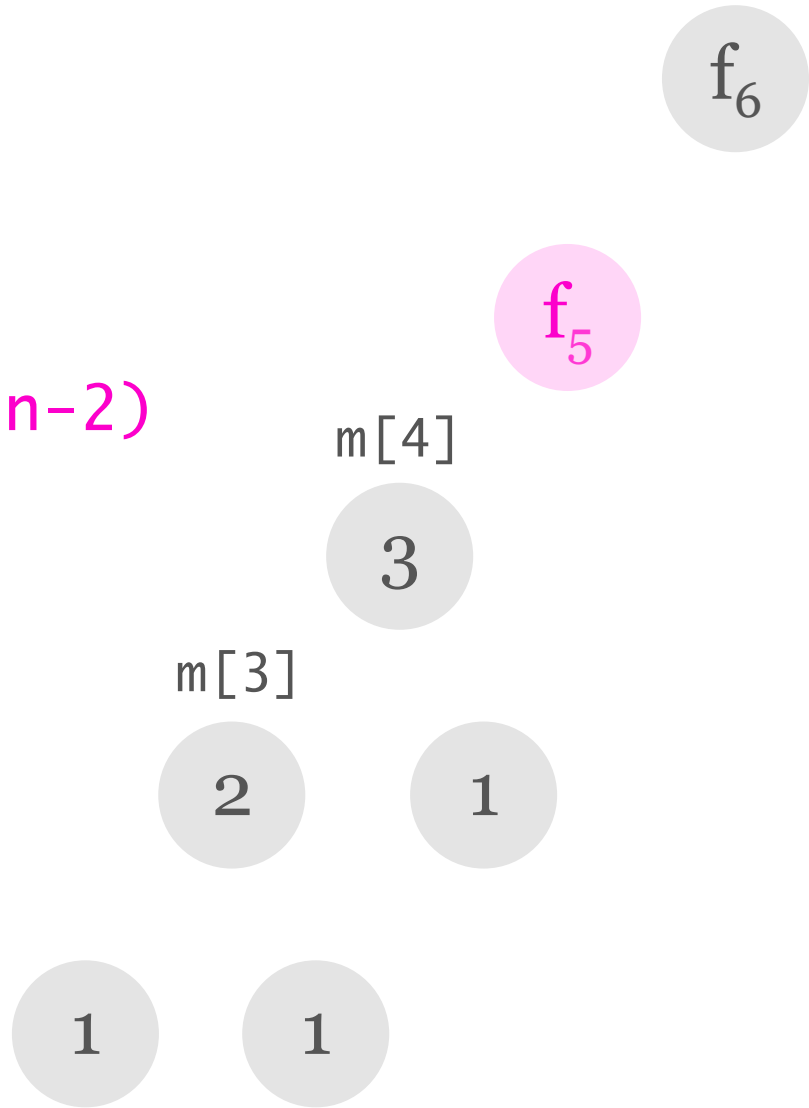
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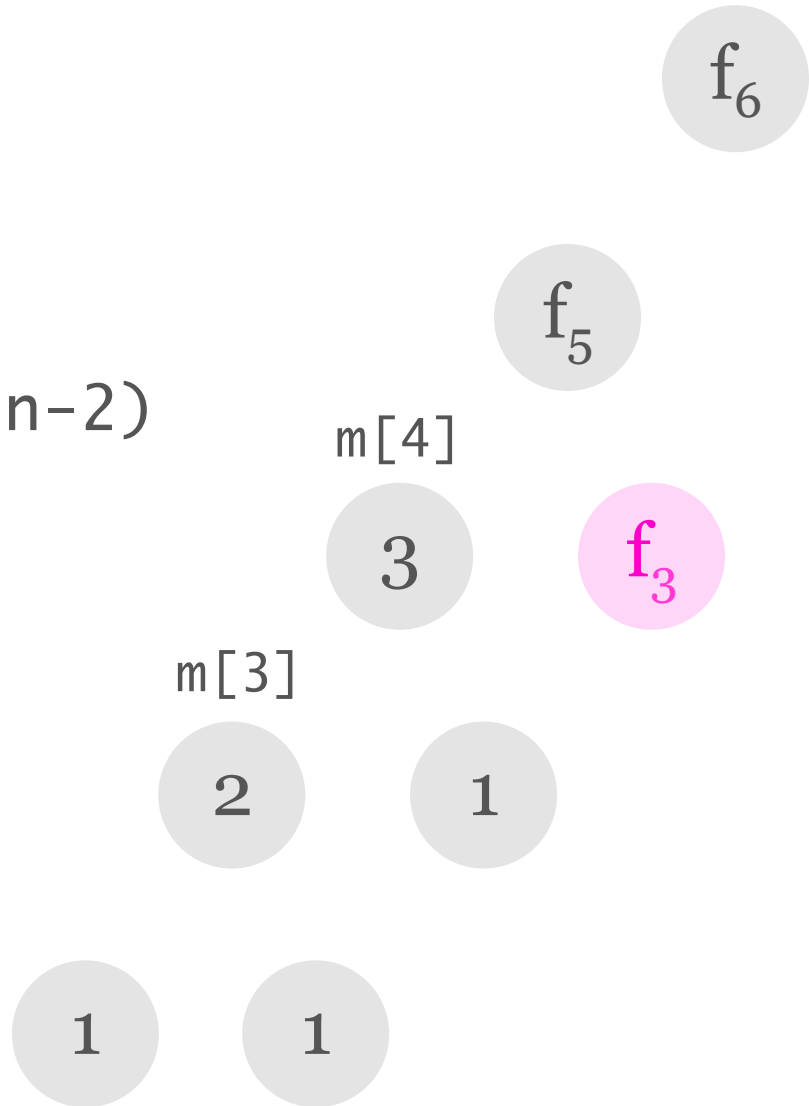
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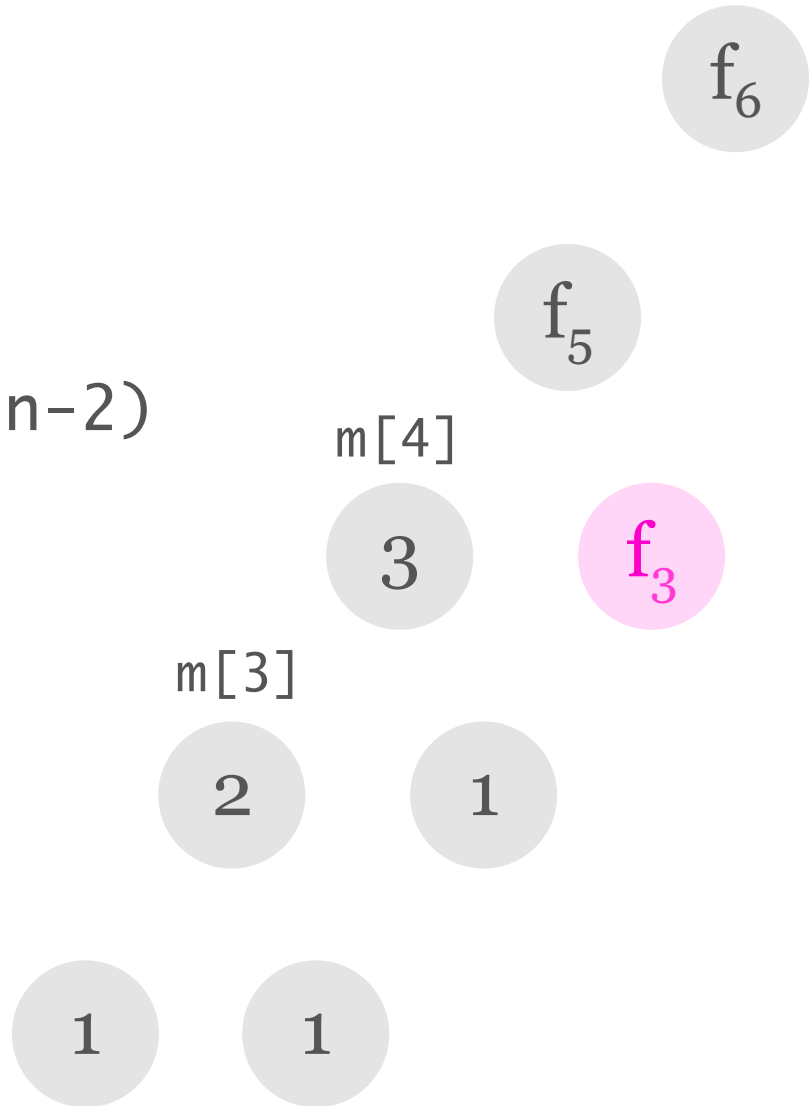
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fib(5):  
    if n in m  
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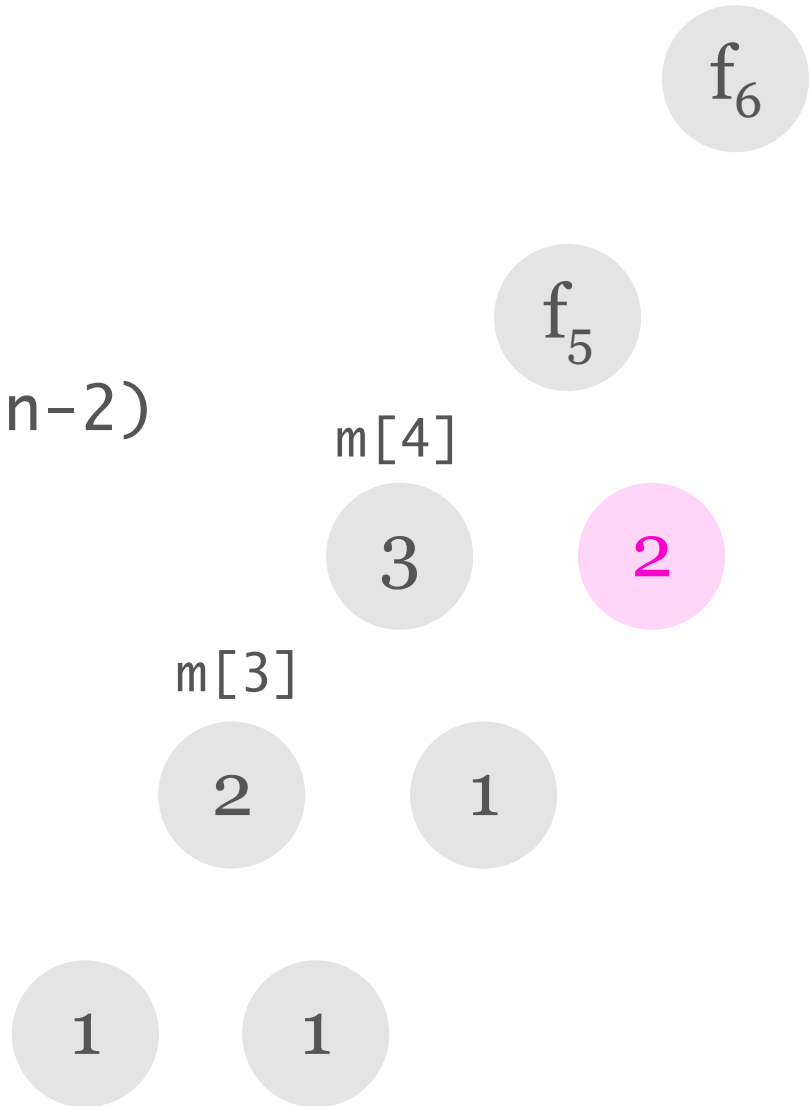
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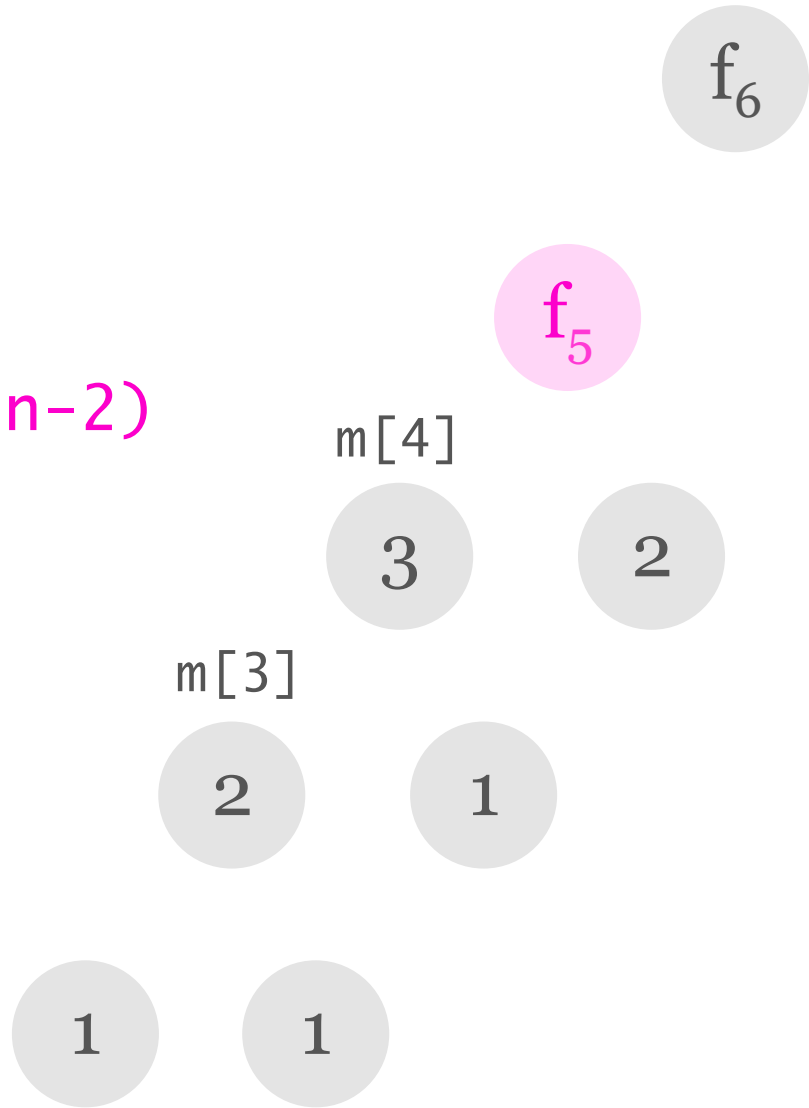
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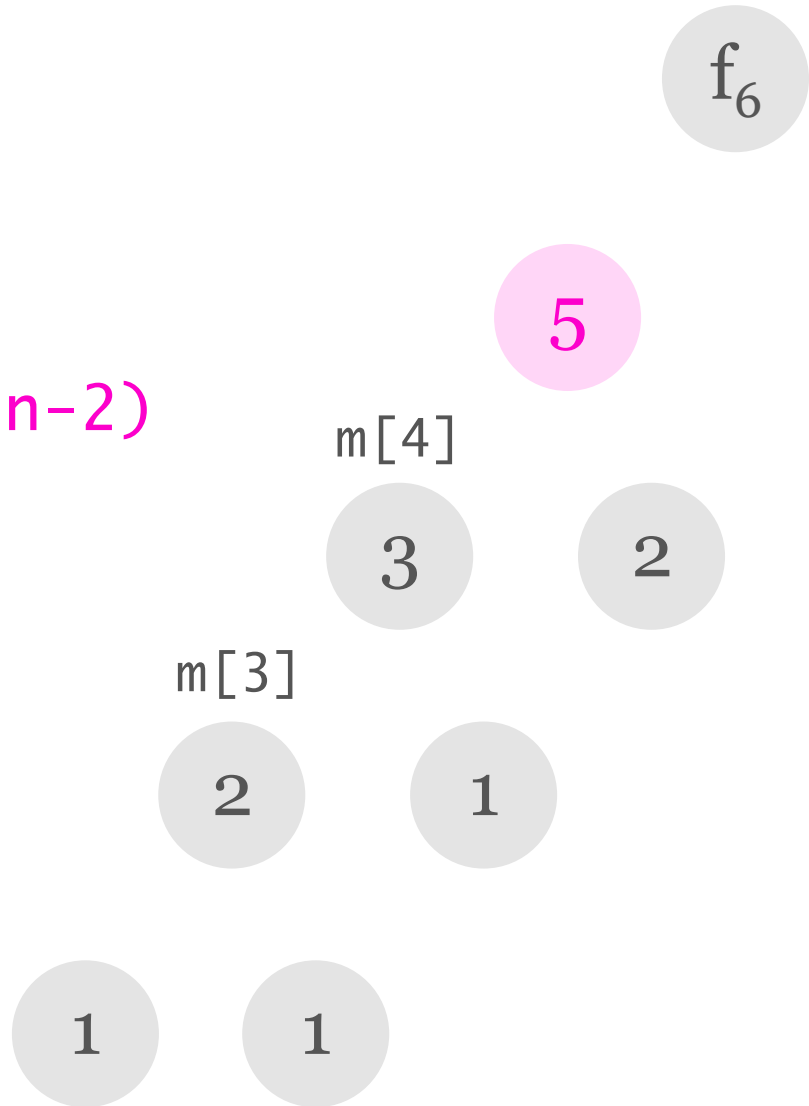
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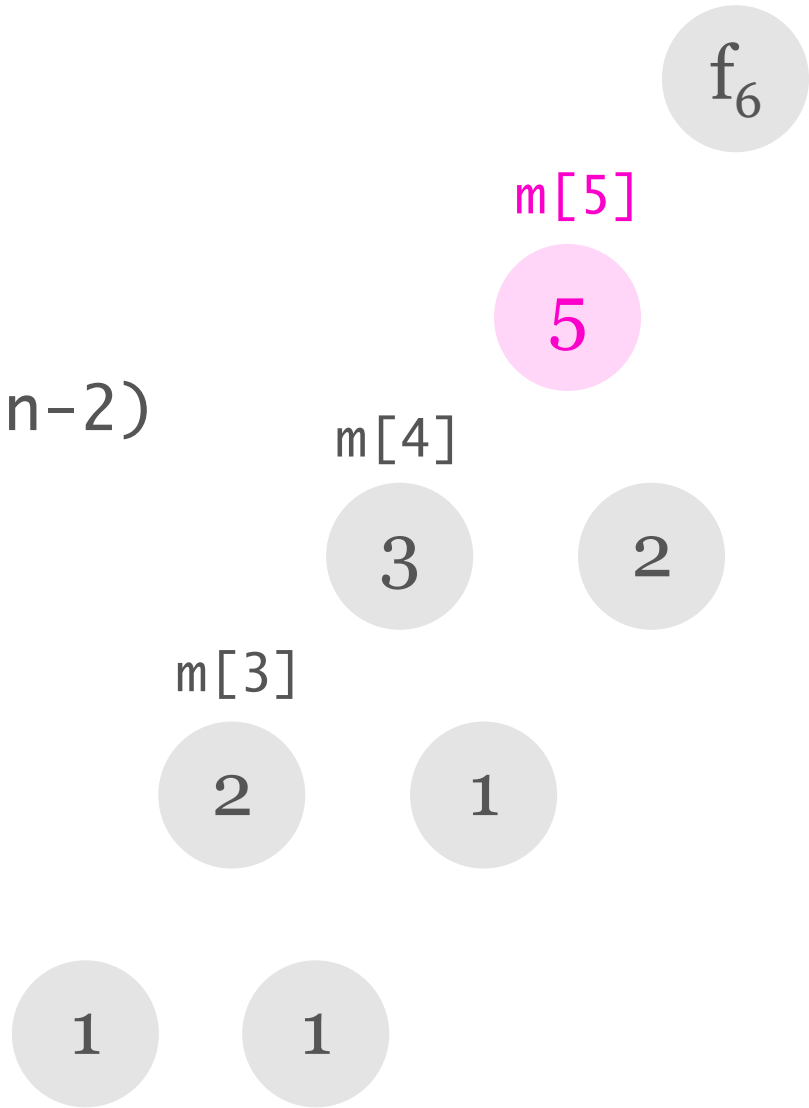

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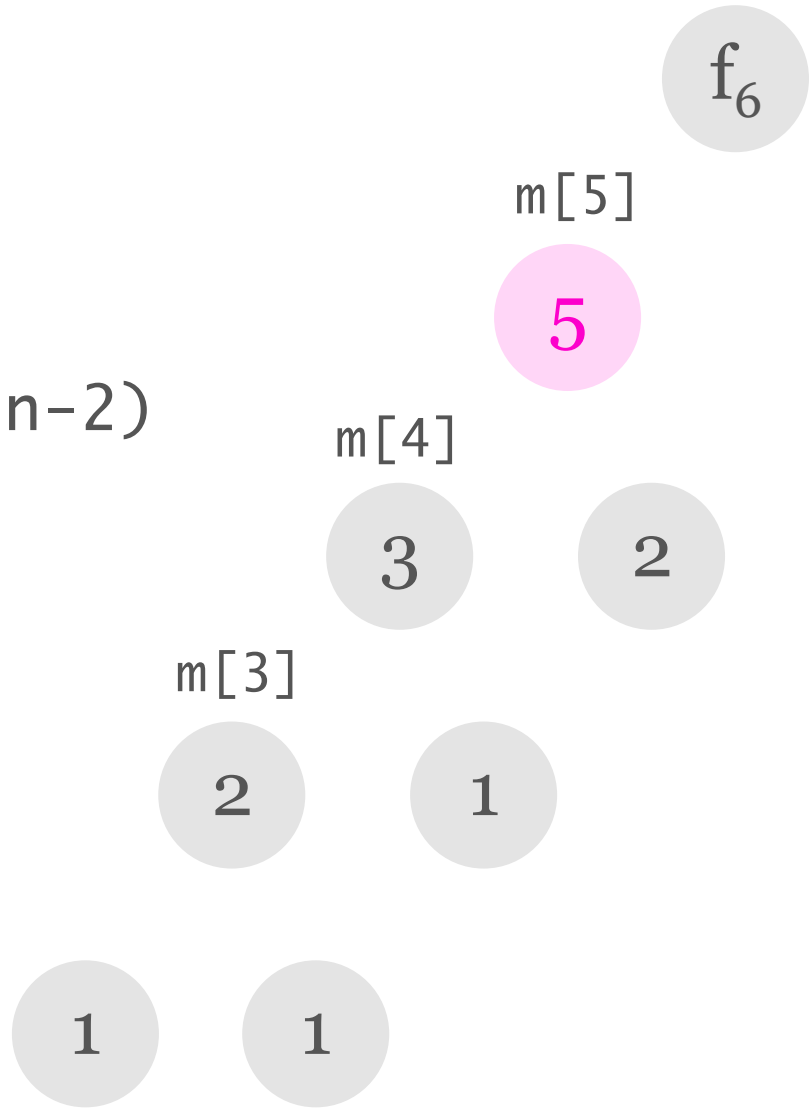
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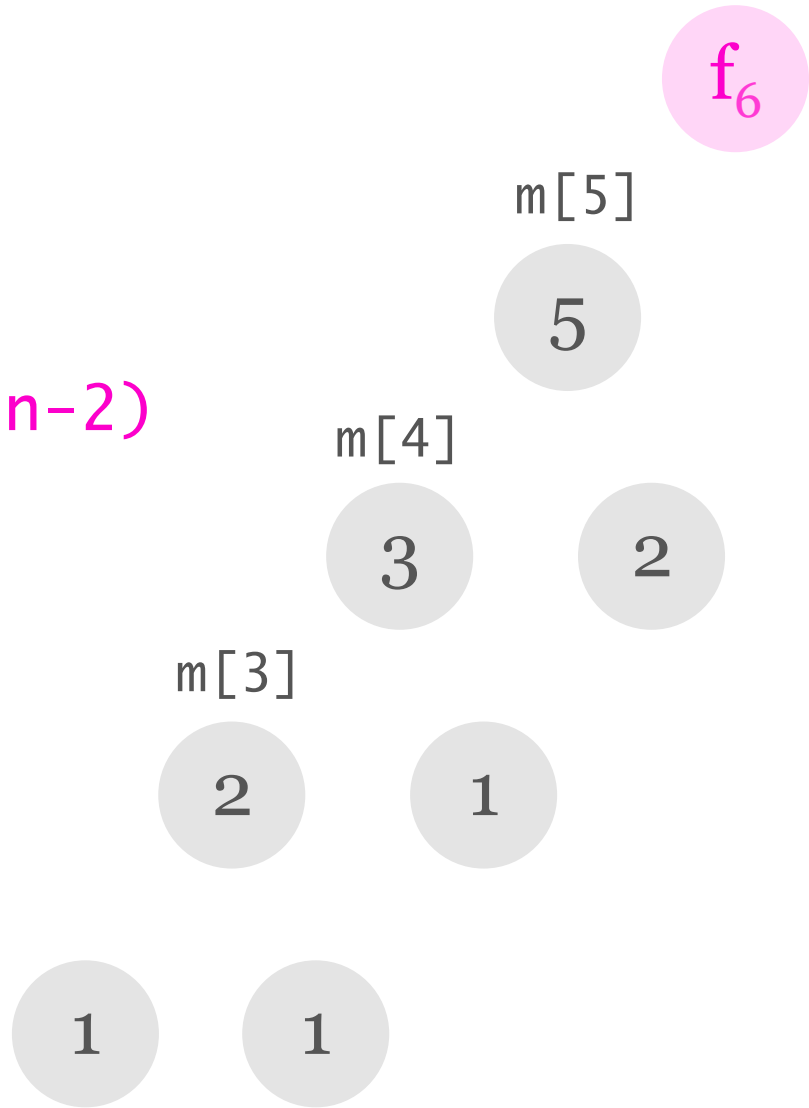
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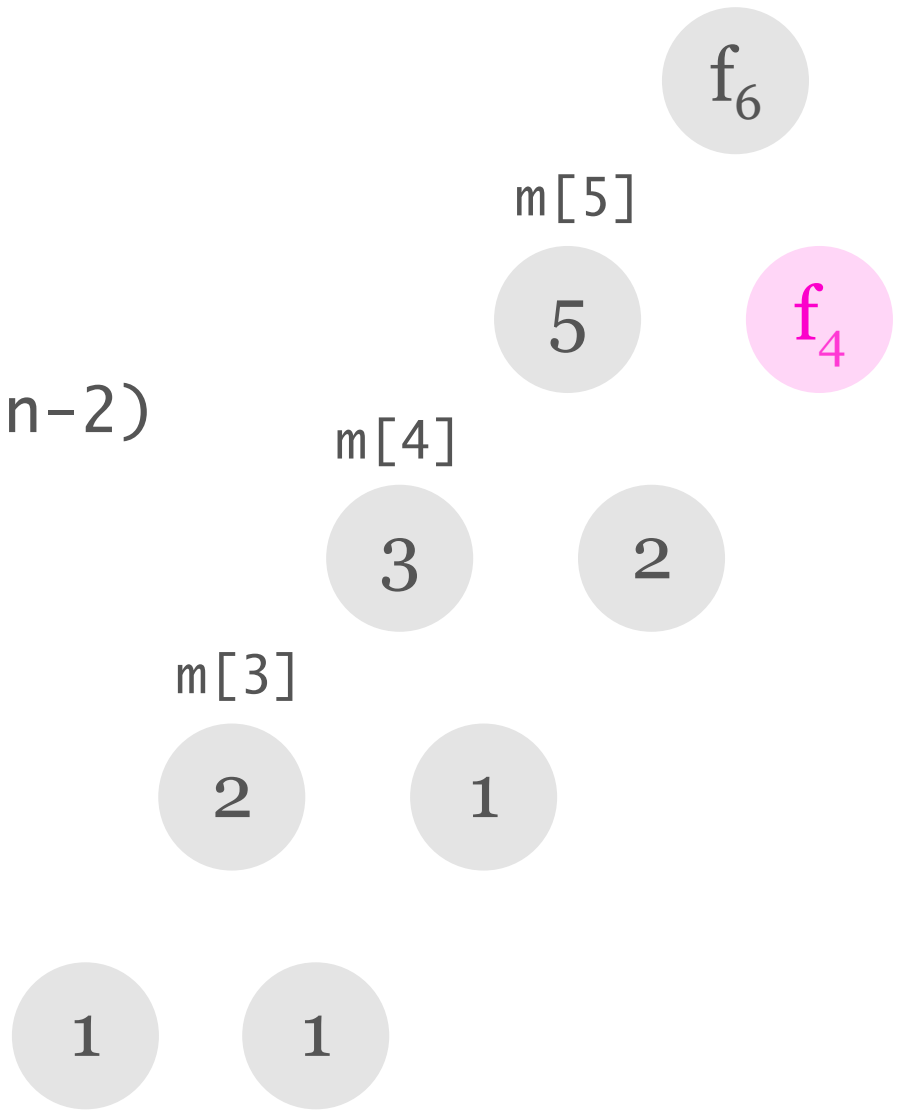
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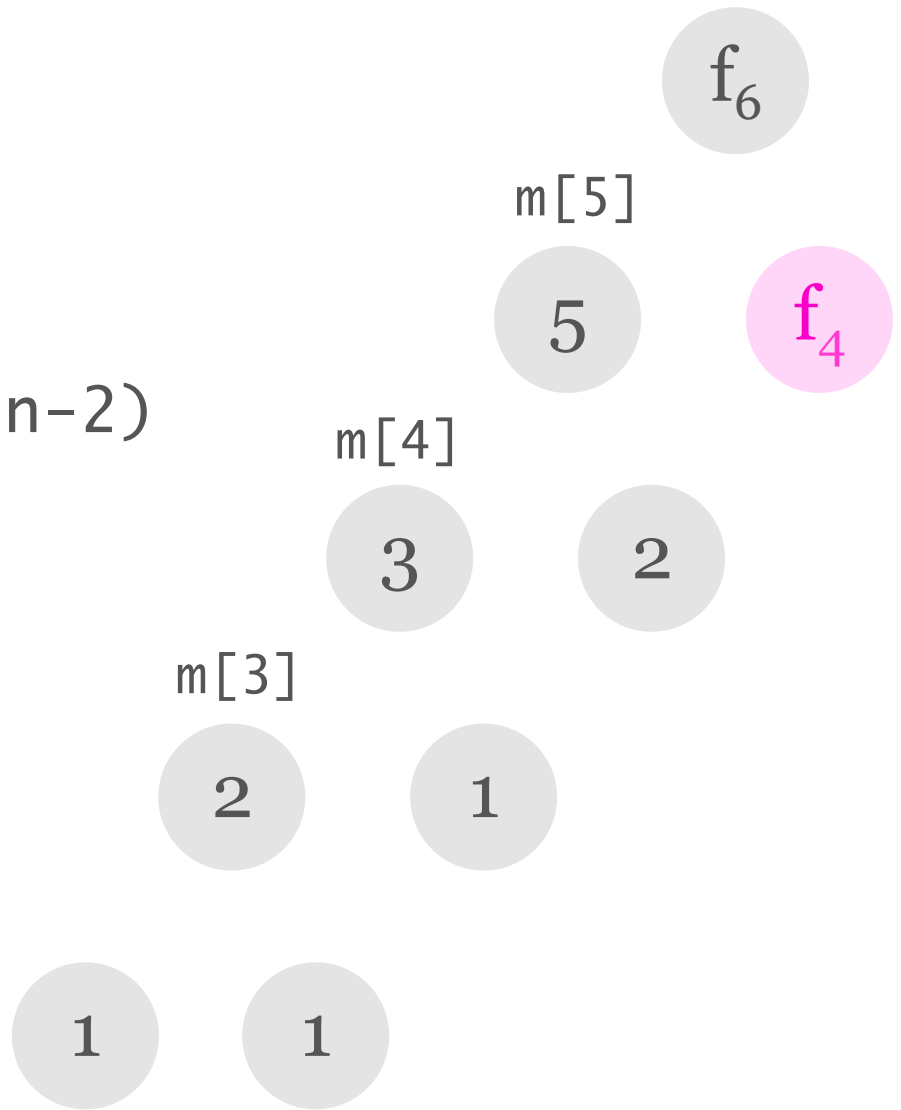
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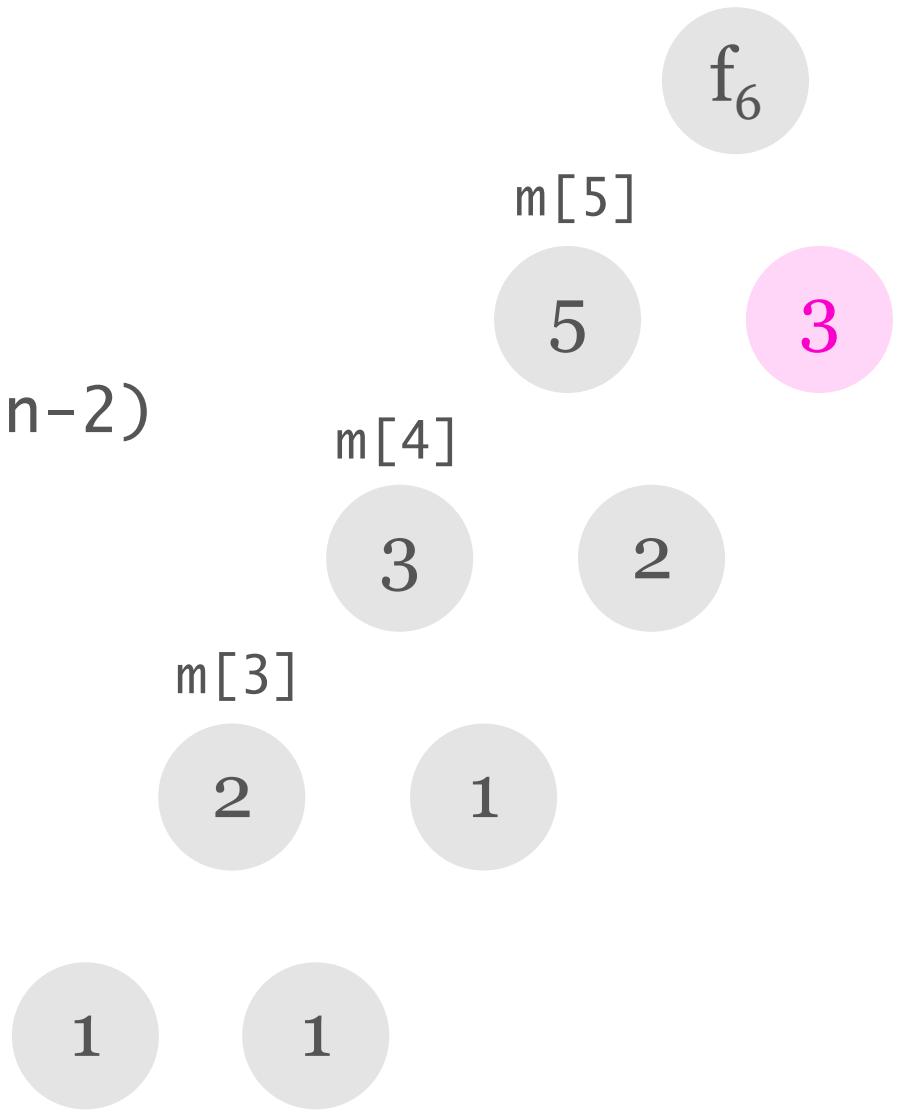
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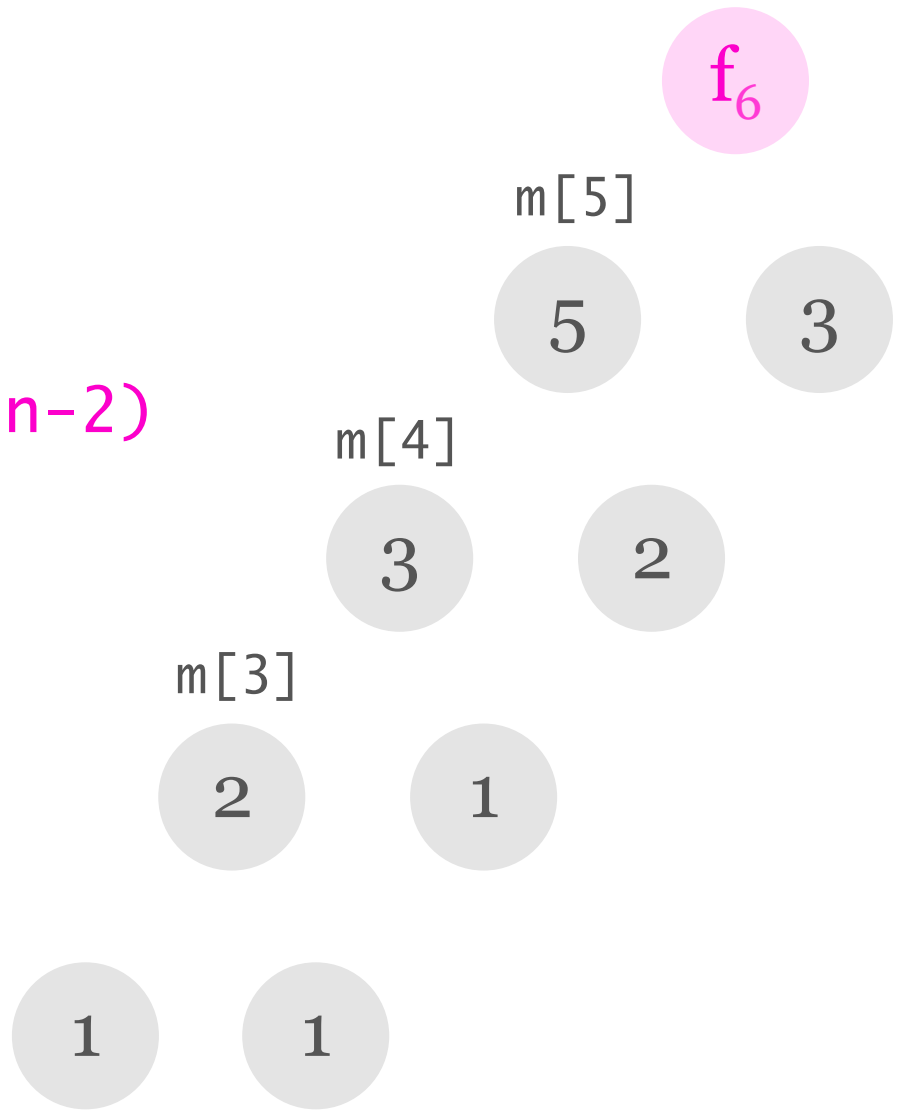
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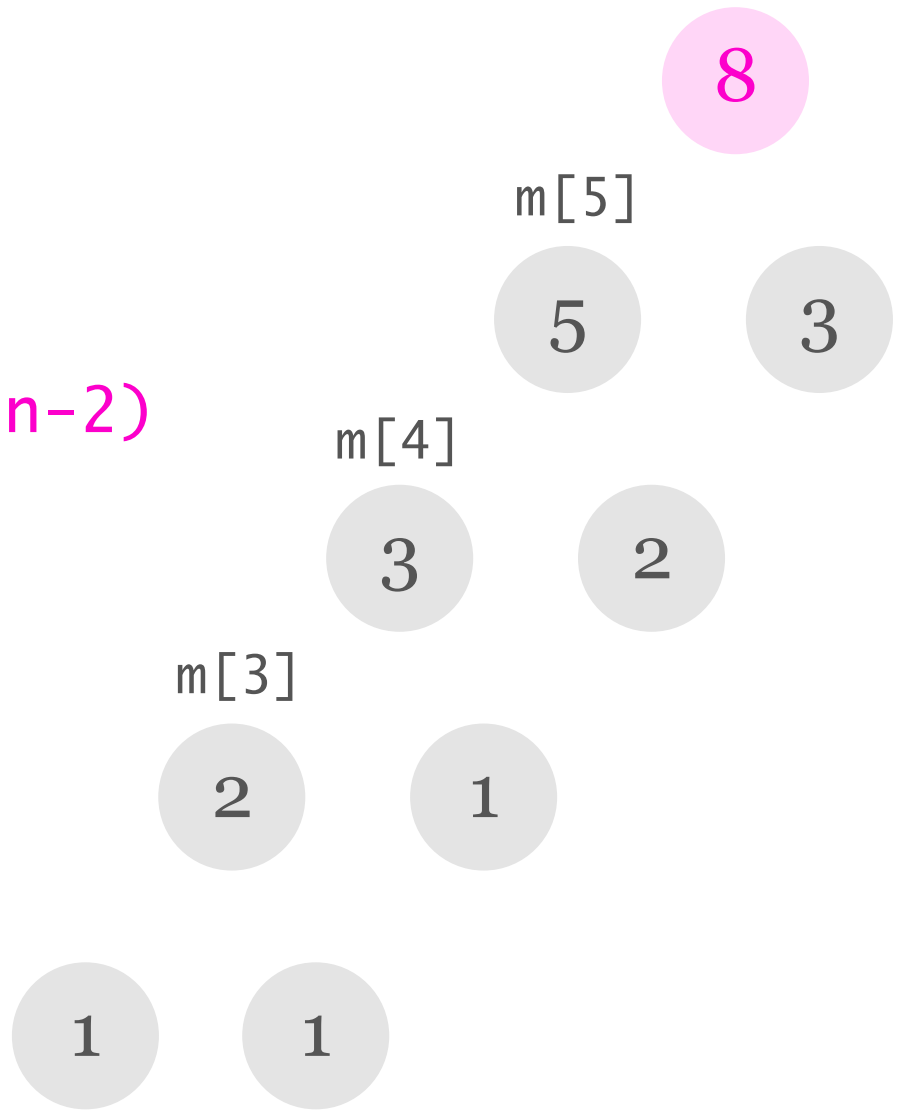
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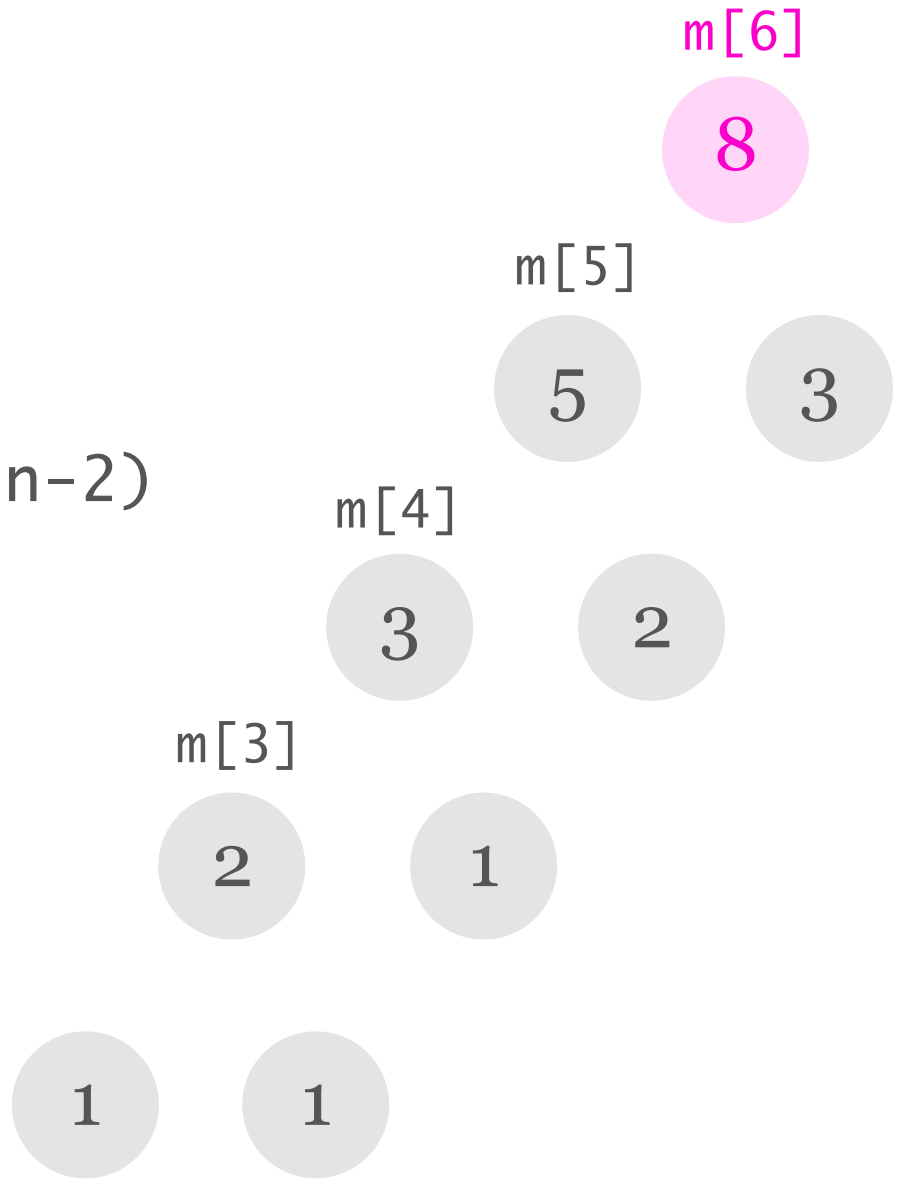

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