

1) 0		
1		$\rightarrow 10 \rightarrow 19 \rightarrow 28$
2		$\rightarrow 20$
3		$\rightarrow 12$
4		
5	5	$\rightarrow 5$
6		$\rightarrow 33 \rightarrow 15$
7		
8		$\rightarrow 17$

$$h(5) = 5 \bmod 9 = 5$$

$$h(28) = 28 \bmod 9 = 1$$

$$h(19) = 19 \bmod 9 = 1 \text{ no frente}$$

$$h(15) = 15 \bmod 9 = 6$$

$$h(20) = 20 \bmod 9 = 2$$

$$h(33) = 33 \bmod 9 = 6 \text{ no frente}$$

$$h(12) = 12 \bmod 9 = 3$$

$$h(17) = 17 \bmod 9 = 8$$

$$h(10) = 10 \bmod 9 = 1 \text{ no frente}$$

2)	0	22	0	22
1			1	
2			2	
3			3	17
4	4		4	4
5	15		5	
6	28		6	28
7	17		7	
8			8	15
9	31		9	31
10	10		10	10

Sondagem Linear: 2 colunas

$$10 \text{ mod } 11 = 10$$

$$22 \text{ mod } 11 = 0$$

$$31 \text{ mod } 11 = 9$$

$$4 \text{ mod } 11 = 4$$

$$15 \text{ mod } 11 = 4 - \text{Coluna} + 1 = 5$$

$$28 \text{ mod } 11 = 6$$

$$17 \text{ mod } 11 = 6 - \text{Coluna} + 1 = 7$$

Sondagem Quadrática: 4 colunas

$$10 \text{ mod } 11 = 10$$

$$//$$

$$//$$

$$//$$

$$15 \text{ mod } 11 = 4 - \text{Coluna } (1+7) + 4 = 8$$

$$28 \text{ mod } 11 = 6$$

$$17 \text{ mod } 11 = 6 - \text{Coluna } (4) + 6 = 10 - \text{Coluna } (2+3 \cdot 4) + 6$$

$$22 \text{ mod } 11 = 0 - \text{Coluna } (3+3 \cdot 9) + 6 \text{ mod } 11 = 3$$

210	22
1	
2	
3	17
4	4
5	15
6	28
7	
8	
9	31
10	10

3 colunas

Half duplo:

$$10 = 10 \text{ mod } 11 = 10$$

$$22 = 22 \text{ mod } 11 = 0$$

$$31 = 31 \text{ mod } 11 = 9$$

$$4 = 4 \text{ mod } 11 = 4$$

$$15 = 15 \text{ mod } 11 \rightsquigarrow 4 \rightsquigarrow \text{coluna: } 4 + (1 + 5) \rightsquigarrow 10 \rightsquigarrow \text{coluna} \rightsquigarrow 4 + 1 \text{ mod } 11 \rightsquigarrow 5$$

$$28 = 28 \text{ mod } 11 = 6$$

$$17 = 17 \text{ mod } 11 = 6 \rightsquigarrow \text{coluna: } 6 + (1 + 7) \text{ mod } 11 \rightsquigarrow 3$$