**wildcard and fam formula**

**\*wildcard and \*fam**

**\*1 \*3 \*7 \*9**

**\*fam01 \*fam11 \*fam13 \*fam23 \*fam07 \*fam17 \*fam19 \*fam29**

**sub-keys01 sub-keys11 sub-keys13 sub-keys23 sub-keys07 sub-keys17 sub-keys19 sub-keys29**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **sub-keys01** | **sub-keys11** | **sub-keys13** | **sub-keys23** | **sub-keys07** | **sub-keys17** | **sub-keys19** | **sub-keys29** |
| **sub01fam01 = 1** | **sub11fam11 = 1** | **sub13fam13 = 1** | **sub23fam23 = 1** | **sub07fam07 = 1** | **sub17fam17 = 1** | **sub19fam19 = 1** | **sub29fam29 = 1** |
| **sub01fam07 = 7** | **sub11fam23 = 7** | **sub13fam19 = 7** | **sub23fam29 = 7** | **sub07fam01 = 7** | **sub17fam11 = 7** | **sub19fam07 = 7** | **sub29fam23 = 7** |
| **sub01fam11 = 11** | **sub11fam01 = 11** | **sub13fam23 = 11** | **sub23fam13 = 11** | **sub07fam17 = 11** | **sub17fam07 = 11** | **sub19fam29 = 11** | **sub29fam19 = 11** |
| **sub01fam13 = 13** | **sub11fam17 = 13** | **sub13fam01 = 13** | **sub23fam11 = 13** | **sub07fam19 = 13** | **sub17fam29 = 13** | **sub19fam13 = 13** | **sub29fam17 = 13** |
| **sub01fam17 = 17** | **sub11fam13 = 17** | **sub13fam29 = 17** | **sub23fam19 = 17** | **sub07fam11 = 17** | **sub17fam01 = 17** | **sub19fam17 = 17** | **sub29fam13 = 17** |
| **sub01fam19 = 19** | **sub11fam29 = 19** | **sub13fam07 = 19** | **sub23fam17 = 19** | **sub07fam13 = 19** | **sub17fam23 = 19** | **sub19fam01 = 19** | **sub29fam11 = 19** |
| **sub01fam23 = 23** | **sub11fam07 = 23** | **sub13fam11 = 23** | **sub23fam01 = 23** | **sub07fam29 = 23** | **sub17fam19 = 23** | **sub19fam23 = 23** | **sub29fam07 = 23** |
| **sub01fam29 = 29** | **sub11fam19 = 29** | **sub13fam17 = 29** | **sub23fam07 = 29** | **sub07fam23 = 29** | **sub17fam13 = 29** | **sub19fam11 = 29** | **sub29fam01 = 29** |

**Loop thru the sub-key and add 30 to the sub-key each loop.**

**Test up 1/7 (0.142859) – the limit – see in the “neighborhood of” document.**

**Test for: if ((( PS / sub??fam??) % 1 ) == 0 )**

**If any zero value record factor – else prime .**

**‘just another 30 away’**

**Diagram showing the uniqueness of the sub-keys and its data. Each matrix is a \*pair. Sort order is by key data order**

**See TioCash.pdf - Sorted Headings p330 - Dynamic \*fam Matrix Headings p 334**

**(\*fam01 & \*fam29)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **sub-keys01** | **sub-keys07** | **sub-keys11** | **sub-keys13** | **sub-keys17** | **sub-keys19** | **sub-keys23** | **sub-keys29** |
| **sub01fam01 = 1** | **sub07fam07 = 1** | **sub11fam11 = 1** | **sub13fam13 = 1** | **sub17fam17 = 1** | **sub19fam19 = 1** | **sub23fam23 = 1** | **sub29fam29 = 1** |
| **sub01fam07 = 7** | **sub07fam01 = 7** | **sub11fam23 = 7** | **sub13fam19 = 7** | **sub17fam11 = 7** | **sub19fam07 = 7** | **sub23fam29 = 7** | **sub29fam23 = 7** |
| **sub01fam11 = 11** | **sub07fam17 = 11** | **sub11fam01 = 11** | **sub13fam23 = 11** | **sub17fam07 = 11** | **sub19fam29 = 11** | **sub23fam13 = 11** | **sub29fam19 = 11** |
| **sub01fam13 = 13** | **sub07fam19 = 13** | **sub11fam17 = 13** | **sub13fam01 = 13** | **sub17fam29 = 13** | **sub19fam13 = 13** | **sub23fam11 = 13** | **sub29fam17 = 13** |
| **sub01fam17 = 17** | **sub07fam11 = 17** | **sub11fam13 = 17** | **sub13fam29 = 17** | **sub17fam01 = 17** | **sub19fam17 = 17** | **sub23fam19 = 17** | **sub29fam13 = 17** |
| **sub01fam19 = 19** | **sub07fam13 = 19** | **sub11fam29 = 19** | **sub13fam07 = 19** | **sub17fam23 = 19** | **sub19fam01 = 19** | **sub23fam17 = 19** | **sub29fam11 = 19** |
| **sub01fam23 = 23** | **sub07fam29 = 23** | **sub11fam07 = 23** | **sub13fam11 = 23** | **sub17fam19 = 23** | **sub19fam23 = 23** | **sub23fam01 = 23** | **sub29fam07 = 23** |
| **sub01fam29 = 29** | **sub07fam23 = 29** | **sub11fam19 = 29** | **sub13fam17 = 29** | **sub17fam13 = 29** | **sub19fam11 = 29** | **sub23fam07 = 29** | **sub29fam01 = 29** |

**(\*fam07 and \* fam23**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **sub-keys01** | **sub-keys07** | **sub-keys11** | **sub-keys13** | **sub-keys17** | **sub-keys19** | **sub-keys23** | **sub-keys29** |
| **sub01fam01 = 1** | **sub07fam07 = 1** | **sub11fam11 = 1** | **sub13fam13 = 1** | **sub17fam17 = 1** | **sub19fam19 = 1** | **sub23fam23 = 1** | **sub29fam29 = 1** |
| **sub01fam07 = 7** | **sub07fam01 = 7** | **sub11fam23 = 7** | **sub13fam19 = 7** | **sub17fam11 = 7** | **sub19fam07 = 7** | **sub23fam29 = 7** | **sub29fam23 = 7** |
| **sub01fam11 = 11** | **sub07fam17 = 11** | **sub11fam01 = 11** | **sub13fam23 = 11** | **sub17fam07 = 11** | **sub19fam29 = 11** | **sub23fam13 = 11** | **sub29fam19 = 11** |
| **sub01fam13 = 13** | **sub07fam19 = 13** | **sub11fam17 = 13** | **sub13fam01 = 13** | **sub17fam29 = 13** | **sub19fam13 = 13** | **sub23fam11 = 13** | **sub29fam17 = 13** |
| **sub01fam17 = 17** | **sub07fam11 = 17** | **sub11fam13 = 17** | **sub13fam29 = 17** | **sub17fam01 = 17** | **sub19fam17 = 17** | **sub23fam19 = 17** | **sub29fam13 = 17** |
| **sub01fam19 = 19** | **sub07fam13 = 19** | **sub11fam29 = 19** | **sub13fam07 = 19** | **sub17fam23 = 19** | **sub19fam01 = 19** | **sub23fam17 = 19** | **sub29fam11 = 19** |
| **sub01fam23 = 23** | **sub07fam29 = 23** | **sub11fam07 = 23** | **sub13fam11 = 23** | **sub17fam19 = 23** | **sub19fam23 = 23** | **sub23fam01 = 23** | **sub29fam07 = 23** |
| **sub01fam29 = 29** | **sub07fam23 = 29** | **sub11fam19 = 29** | **sub13fam17 = 29** | **sub17fam13 = 29** | **sub19fam11 = 29** | **sub23fam07 = 29** | **sub29fam01 = 29** |

**(\*fam11 and \*fam19)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **sub-keys01** | **sub-keys07** | **sub-keys11** | **sub-keys13** | **sub-keys17** | **sub-keys19** | **sub-keys23** | **sub-keys29** |
| **sub01fam01 = 1** | **sub07fam07 = 1** | **sub11fam11 = 1** | **sub13fam13 = 1** | **sub17fam17 = 1** | **sub19fam19 = 1** | **sub23fam23 = 1** | **sub29fam29 = 1** |
| **sub01fam07 = 7** | **sub07fam01 = 7** | **sub11fam23 = 7** | **sub13fam19 = 7** | **sub17fam11 = 7** | **sub19fam07 = 7** | **sub23fam29 = 7** | **sub29fam23 = 7** |
| **sub01fam11 = 11** | **sub07fam17 = 11** | **sub11fam01 = 11** | **sub13fam23 = 11** | **sub17fam07 = 11** | **sub19fam29 = 11** | **sub23fam13 = 11** | **sub29fam19 = 11** |
| **sub01fam13 = 13** | **sub07fam19 = 13** | **sub11fam17 = 13** | **sub13fam01 = 13** | **sub17fam29 = 13** | **sub19fam13 = 13** | **sub23fam11 = 13** | **sub29fam17 = 13** |
| **sub01fam17 = 17** | **sub07fam11 = 17** | **sub11fam13 = 17** | **sub13fam29 = 17** | **sub17fam01 = 17** | **sub19fam17 = 17** | **sub23fam19 = 17** | **sub29fam13 = 17** |
| **sub01fam19 = 19** | **sub07fam13 = 19** | **sub11fam29 = 19** | **sub13fam07 = 19** | **sub17fam23 = 19** | **sub19fam01 = 19** | **sub23fam17 = 19** | **sub29fam11 = 19** |
| **sub01fam23 = 23** | **sub07fam29 = 23** | **sub11fam07 = 23** | **sub13fam11 = 23** | **sub17fam19 = 23** | **sub19fam23 = 23** | **sub23fam01 = 23** | **sub29fam07 = 23** |
| **sub01fam29 = 29** | **sub07fam23 = 29** | **sub11fam19 = 29** | **sub13fam17 = 29** | **sub17fam13 = 29** | **sub19fam11 = 29** | **sub23fam07 = 29** | **sub29fam01 = 29** |

**(\*fam13 and \*fam17)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **sub-keys01** | **sub-keys07** | **sub-keys11** | **sub-keys13** | **sub-keys17** | **sub-keys19** | **sub-keys23** | **sub-keys29** |
| **sub01fam01 = 1** | **sub07fam07 = 1** | **sub11fam11 = 1** | **sub13fam13 = 1** | **sub17fam17 = 1** | **sub19fam19 = 1** | **sub23fam23 = 1** | **sub29fam29 = 1** |
| **sub01fam07 = 7** | **sub07fam01 = 7** | **sub11fam23 = 7** | **sub13fam19 = 7** | **sub17fam11 = 7** | **sub19fam07 = 7** | **sub23fam29 = 7** | **sub29fam23 = 7** |
| **sub01fam11 = 11** | **sub07fam17 = 11** | **sub11fam01 = 11** | **sub13fam23 = 11** | **sub17fam07 = 11** | **sub19fam29 = 11** | **sub23fam13 = 11** | **sub29fam19 = 11** |
| **sub01fam13 = 13** | **sub07fam19 = 13** | **sub11fam17 = 13** | **sub13fam01 = 13** | **sub17fam29 = 13** | **sub19fam13 = 13** | **sub23fam11 = 13** | **sub29fam17 = 13** |
| **sub01fam17 = 17** | **sub07fam11 = 17** | **sub11fam13 = 17** | **sub13fam29 = 17** | **sub17fam01 = 17** | **sub19fam17 = 17** | **sub23fam19 = 17** | **sub29fam13 = 17** |
| **sub01fam19 = 19** | **sub07fam13 = 19** | **sub11fam29 = 19** | **sub13fam07 = 19** | **sub17fam23 = 19** | **sub19fam01 = 19** | **sub23fam17 = 19** | **sub29fam11 = 19** |
| **sub01fam23 = 23** | **sub07fam29 = 23** | **sub11fam07 = 23** | **sub13fam11 = 23** | **sub17fam19 = 23** | **sub19fam23 = 23** | **sub23fam01 = 23** | **sub29fam07 = 23** |
| **sub01fam29 = 29** | **sub07fam23 = 29** | **sub11fam19 = 29** | **sub13fam17 = 29** | **sub17fam13 = 29** | **sub19fam11 = 29** | **sub23fam07 = 29** | **sub29fam01 = 29** |

**Each matrix is a \*pair. Sort order is by \*fam order**

**(\*fam01 & \*fam29)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **sub-keys01** | **sub-keys07** | **sub-keys11** | **sub-keys13** | **sub-keys17** | **sub-keys19** | **sub-keys23** | **sub-keys29** |
| **sub01fam01 = 1** | **sub07fam01 = 7** | **sub11fam01 = 11** | **sub13fam01 = 13** | **sub17fam01 = 17** | **sub19fam01 = 19** | **sub23fam01 = 23** | **sub29fam01 = 29** |
| **sub01fam07 = 7** | **sub07fam07 = 1** | **sub11fam07 = 23** | **sub13fam07 = 19** | **sub17fam07 = 11** | **sub19fam07 = 7** | **sub23fam07 = 29** | **sub29fam07 = 23** |
| **sub01fam11 = 11** | **sub07fam11 = 17** | **sub11fam11 = 1** | **sub13fam11 = 23** | **sub17fam11 = 7** | **sub19fam11 = 29** | **sub23fam11 = 13** | **sub29fam11 = 19** |
| **sub01fam13 = 13** | **sub07fam13 = 19** | **sub11fam13 = 17** | **sub13fam13 = 1** | **sub17fam13 = 29** | **sub19fam13 = 13** | **sub23fam13 = 11** | **sub29fam13 = 17** |
| **sub01fam17 = 17** | **sub07fam17 = 11** | **sub11fam17 = 13** | **sub13fam17 = 29** | **sub17fam17 = 1** | **sub19fam17 = 17** | **sub23fam17 = 19** | **sub29fam17 = 13** |
| **sub01fam19 = 19** | **sub07fam19 = 13** | **sub11fam19 = 29** | **sub13fam19 = 7** | **sub17fam19 = 23** | **sub19fam19 = 1** | **sub23fam19 = 17** | **sub29fam19 = 11** |
| **sub01fam23 = 23** | **sub07fam23 = 29** | **sub11fam23 = 7** | **sub13fam23 = 11** | **sub17fam23 = 19** | **sub19fam23 = 23** | **sub23fam23 = 1** | **sub29fam23 = 7** |
| **sub01fam29 = 29** | **sub07fam29 = 23** | **sub11fam29 = 19** | **sub13fam29 = 17** | **sub17fam29 = 13** | **sub19fam29 = 11** | **sub23fam29 = 7** | **sub29fam29 = 1** |

**(\*fam07 and \* fam23**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **sub-keys01** | **sub-keys07** | **sub-keys11** | **sub-keys13** | **sub-keys17** | **sub-keys19** | **sub-keys23** | **sub-keys29** |
| **sub01fam01 = 1** | **sub07fam01 = 7** | **sub11fam01 = 11** | **sub13fam01 = 13** | **sub17fam01 = 17** | **sub19fam01 = 19** | **sub23fam01 = 23** | **sub29fam01 = 29** |
| **sub01fam07 = 7** | **sub07fam07 = 1** | **sub11fam07 = 23** | **sub13fam07 = 19** | **sub17fam07 = 11** | **sub19fam07 = 7** | **sub23fam07 = 29** | **sub29fam07 = 23** |
| **sub01fam11 = 11** | **sub07fam11 = 17** | **sub11fam11 = 1** | **sub13fam11 = 23** | **sub17fam11 = 7** | **sub19fam11 = 29** | **sub23fam11 = 13** | **sub29fam11 = 19** |
| **sub01fam13 = 13** | **sub07fam13 = 19** | **sub11fam13 = 17** | **sub13fam13 = 1** | **sub17fam13 = 29** | **sub19fam13 = 13** | **sub23fam13 = 11** | **sub29fam13 = 17** |
| **sub01fam17 = 17** | **sub07fam17 = 11** | **sub11fam17 = 13** | **sub13fam17 = 29** | **sub17fam17 = 1** | **sub19fam17 = 17** | **sub23fam17 = 19** | **sub29fam17 = 13** |
| **sub01fam19 = 19** | **sub07fam19 = 13** | **sub11fam19 = 29** | **sub13fam19 = 7** | **sub17fam19 = 23** | **sub19fam19 = 1** | **sub23fam19 = 17** | **sub29fam19 = 11** |
| **sub01fam23 = 23** | **sub07fam23 = 29** | **sub11fam23 = 7** | **sub13fam23 = 11** | **sub17fam23 = 19** | **sub19fam23 = 23** | **sub23fam23 = 1** | **sub29fam23 = 7** |
| **sub01fam29 = 29** | **sub07fam29 = 23** | **sub11fam29 = 19** | **sub13fam29 = 17** | **sub17fam29 = 13** | **sub19fam29 = 11** | **sub23fam29 = 7** | **sub29fam29 = 1** |

**(\*fam11 and \*fam19)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **sub-keys01** | **sub-keys07** | **sub-keys11** | **sub-keys13** | **sub-keys17** | **sub-keys19** | **sub-keys23** | **sub-keys29** |
| **sub01fam01 = 1** | **sub07fam01 = 7** | **sub11fam01 = 11** | **sub13fam01 = 13** | **sub17fam01 = 17** | **sub19fam01 = 19** | **sub23fam01 = 23** | **sub29fam01 = 29** |
| **sub01fam07 = 7** | **sub07fam07 = 1** | **sub11fam07 = 23** | **sub13fam07 = 19** | **sub17fam07 = 11** | **sub19fam07 = 7** | **sub23fam07 = 29** | **sub29fam07 = 23** |
| **sub01fam11 = 11** | **sub07fam11 = 17** | **sub11fam11 = 1** | **sub13fam11 = 23** | **sub17fam11 = 7** | **sub19fam11 = 29** | **sub23fam11 = 13** | **sub29fam11 = 19** |
| **sub01fam13 = 13** | **sub07fam13 = 19** | **sub11fam13 = 17** | **sub13fam13 = 1** | **sub17fam13 = 29** | **sub19fam13 = 13** | **sub23fam13 = 11** | **sub29fam13 = 17** |
| **sub01fam17 = 17** | **sub07fam17 = 11** | **sub11fam17 = 13** | **sub13fam17 = 29** | **sub17fam17 = 1** | **sub19fam17 = 17** | **sub23fam17 = 19** | **sub29fam17 = 13** |
| **sub01fam19 = 19** | **sub07fam19 = 13** | **sub11fam19 = 29** | **sub13fam19 = 7** | **sub17fam19 = 23** | **sub19fam19 = 1** | **sub23fam19 = 17** | **sub29fam19 = 11** |
| **sub01fam23 = 23** | **sub07fam23 = 29** | **sub11fam23 = 7** | **sub13fam23 = 11** | **sub17fam23 = 19** | **sub19fam23 = 23** | **sub23fam23 = 1** | **sub29fam23 = 7** |
| **sub01fam29 = 29** | **sub07fam29 = 23** | **sub11fam29 = 19** | **sub13fam29 = 17** | **sub17fam29 = 13** | **sub19fam29 = 11** | **sub23fam29 = 7** | **sub29fam29 = 1** |

**(\*fam13 and \*fam17)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **sub-keys01** | **sub-keys07** | **sub-keys11** | **sub-keys13** | **sub-keys17** | **sub-keys19** | **sub-keys23** | **sub-keys29** |
| **sub01fam01 = 1** | **sub07fam01 = 7** | **sub11fam01 = 11** | **sub13fam01 = 13** | **sub17fam01 = 17** | **sub19fam01 = 19** | **sub23fam01 = 23** | **sub29fam01 = 29** |
| **sub01fam07 = 7** | **sub07fam07 = 1** | **sub11fam07 = 23** | **sub13fam07 = 19** | **sub17fam07 = 11** | **sub19fam07 = 7** | **sub23fam07 = 29** | **sub29fam07 = 23** |
| **sub01fam11 = 11** | **sub07fam11 = 17** | **sub11fam11 = 1** | **sub13fam11 = 23** | **sub17fam11 = 7** | **sub19fam11 = 29** | **sub23fam11 = 13** | **sub29fam11 = 19** |
| **sub01fam13 = 13** | **sub07fam13 = 19** | **sub11fam13 = 17** | **sub13fam13 = 1** | **sub17fam13 = 29** | **sub19fam13 = 13** | **sub23fam13 = 11** | **sub29fam13 = 17** |
| **sub01fam17 = 17** | **sub07fam17 = 11** | **sub11fam17 = 13** | **sub13fam17 = 29** | **sub17fam17 = 1** | **sub19fam17 = 17** | **sub23fam17 = 19** | **sub29fam17 = 13** |
| **sub01fam19 = 19** | **sub07fam19 = 13** | **sub11fam19 = 29** | **sub13fam19 = 7** | **sub17fam19 = 23** | **sub19fam19 = 1** | **sub23fam19 = 17** | **sub29fam19 = 11** |
| **sub01fam23 = 23** | **sub07fam23 = 29** | **sub11fam23 = 7** | **sub13fam23 = 11** | **sub17fam23 = 19** | **sub19fam23 = 23** | **sub23fam23 = 1** | **sub29fam23 = 7** |
| **sub01fam29 = 29** | **sub07fam29 = 23** | **sub11fam29 = 19** | **sub13fam29 = 17** | **sub17fam29 = 13** | **sub19fam29 = 11** | **sub23fam29 = 7** | **sub29fam29 = 1** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **anytime match name or value** | |  |  |  |  |  |  |
| **(\*fam01 & \*fam29)** |  |  |  |  |  |  |  |
| **sub-keys01** | **sub-keys07** | **sub-keys11** | **sub-keys13** | **sub-keys17** | **sub-keys19** | **sub-keys23** | **sub-keys29** |
| **sub01fam01 = 1** | **sub07fam01 = 7** | **sub11fam01 = 11** | **sub13fam01 = 13** | **sub17fam01 = 17** | **sub19fam01 = 19** | **sub23fam01 = 23** | **sub29fam01 = 29** |
| **sub01fam07 = 7** | **sub07fam07 = 1** | **sub11fam07 = 23** | **sub13fam07 = 19** | **sub17fam07 = 11** | **sub19fam07 = 7** | **sub23fam07 = 29** | **sub29fam07 = 23** |
| **sub01fam11 = 11** | **sub07fam11 = 17** | **sub11fam11 = 1** | **sub13fam11 = 23** | **sub17fam11 = 7** | **sub19fam11 = 29** | **sub23fam11 = 13** | **sub29fam11 = 19** |
| **sub01fam13 = 13** | **sub07fam13 = 19** | **sub11fam13 = 17** | **sub13fam13 = 1** | **sub17fam13 = 29** | **sub19fam13 = 13** | **sub23fam13 = 11** | **sub29fam13 = 17** |
| **sub01fam17 = 17** | **sub07fam17 = 11** | **sub11fam17 = 13** | **sub13fam17 = 29** | **sub17fam17 = 1** | **sub19fam17 = 17** | **sub23fam17 = 19** | **sub29fam17 = 13** |
| **sub01fam19 = 19** | **sub07fam19 = 13** | **sub11fam19 = 29** | **sub13fam19 = 7** | **sub17fam19 = 23** | **sub19fam19 = 1** | **sub23fam19 = 17** | **sub29fam19 = 11** |
| **sub01fam23 = 23** | **sub07fam23 = 29** | **sub11fam23 = 7** | **sub13fam23 = 11** | **sub17fam23 = 19** | **sub19fam23 = 23** | **sub23fam23 = 1** | **sub29fam23 = 7** |
| **sub01fam29 = 29** | **sub07fam29 = 23** | **sub11fam29 = 19** | **sub13fam29 = 17** | **sub17fam29 = 13** | **sub19fam29 = 11** | **sub23fam29 = 7** | **sub29fam29 = 1** |
|  |  |  |  |  |  |  |  |
| **(\*fam07 and \* fam23** |  |  |  |  |  |  |  |
| **sub-keys01** | **sub-keys07** | **sub-keys11** | **sub-keys13** | **sub-keys17** | **sub-keys19** | **sub-keys23** | **sub-keys29** |
| **sub01fam01 = 1** | **sub07fam01 = 7** | **sub11fam01 = 11** | **sub13fam01 = 13** | **sub17fam01 = 17** | **sub19fam01 = 19** | **sub23fam01 = 23** | **sub29fam01 = 29** |
| **sub01fam07 = 7** | **sub07fam07 = 1** | **sub11fam07 = 23** | **sub13fam07 = 19** | **sub17fam07 = 11** | **sub19fam07 = 7** | **sub23fam07 = 29** | **sub29fam07 = 23** |
| **sub01fam11 = 11** | **sub07fam11 = 17** | **sub11fam11 = 1** | **sub13fam11 = 23** | **sub17fam11 = 7** | **sub19fam11 = 29** | **sub23fam11 = 13** | **sub29fam11 = 19** |
| **sub01fam13 = 13** | **sub07fam13 = 19** | **sub11fam13 = 17** | **sub13fam13 = 1** | **sub17fam13 = 29** | **sub19fam13 = 13** | **sub23fam13 = 11** | **sub29fam13 = 17** |
| **sub01fam17 = 17** | **sub07fam17 = 11** | **sub11fam17 = 13** | **sub13fam17 = 29** | **sub17fam17 = 1** | **sub19fam17 = 17** | **sub23fam17 = 19** | **sub29fam17 = 13** |
| **sub01fam19 = 19** | **sub07fam19 = 13** | **sub11fam19 = 29** | **sub13fam19 = 7** | **sub17fam19 = 23** | **sub19fam19 = 1** | **sub23fam19 = 17** | **sub29fam19 = 11** |
| **sub01fam23 = 23** | **sub07fam23 = 29** | **sub11fam23 = 7** | **sub13fam23 = 11** | **sub17fam23 = 19** | **sub19fam23 = 23** | **sub23fam23 = 1** | **sub29fam23 = 7** |
| **sub01fam29 = 29** | **sub07fam29 = 23** | **sub11fam29 = 19** | **sub13fam29 = 17** | **sub17fam29 = 13** | **sub19fam29 = 11** | **sub23fam29 = 7** | **sub29fam29 = 1** |
|  |  |  |  |  |  |  |  |
| **(\*fam11 and \*fam19)** |  |  |  |  |  |  |  |
| **sub-keys01** | **sub-keys07** | **sub-keys11** | **sub-keys13** | **sub-keys17** | **sub-keys19** | **sub-keys23** | **sub-keys29** |
| **sub01fam01 = 1** | **sub07fam01 = 7** | **sub11fam01 = 11** | **sub13fam01 = 13** | **sub17fam01 = 17** | **sub19fam01 = 19** | **sub23fam01 = 23** | **sub29fam01 = 29** |
| **sub01fam07 = 7** | **sub07fam07 = 1** | **sub11fam07 = 23** | **sub13fam07 = 19** | **sub17fam07 = 11** | **sub19fam07 = 7** | **sub23fam07 = 29** | **sub29fam07 = 23** |
| **sub01fam11 = 11** | **sub07fam11 = 17** | **sub11fam11 = 1** | **sub13fam11 = 23** | **sub17fam11 = 7** | **sub19fam11 = 29** | **sub23fam11 = 13** | **sub29fam11 = 19** |
| **sub01fam13 = 13** | **sub07fam13 = 19** | **sub11fam13 = 17** | **sub13fam13 = 1** | **sub17fam13 = 29** | **sub19fam13 = 13** | **sub23fam13 = 11** | **sub29fam13 = 17** |
| **sub01fam17 = 17** | **sub07fam17 = 11** | **sub11fam17 = 13** | **sub13fam17 = 29** | **sub17fam17 = 1** | **sub19fam17 = 17** | **sub23fam17 = 19** | **sub29fam17 = 13** |
| **sub01fam19 = 19** | **sub07fam19 = 13** | **sub11fam19 = 29** | **sub13fam19 = 7** | **sub17fam19 = 23** | **sub19fam19 = 1** | **sub23fam19 = 17** | **sub29fam19 = 11** |
| **sub01fam23 = 23** | **sub07fam23 = 29** | **sub11fam23 = 7** | **sub13fam23 = 11** | **sub17fam23 = 19** | **sub19fam23 = 23** | **sub23fam23 = 1** | **sub29fam23 = 7** |
| **sub01fam29 = 29** | **sub07fam29 = 23** | **sub11fam29 = 19** | **sub13fam29 = 17** | **sub17fam29 = 13** | **sub19fam29 = 11** | **sub23fam29 = 7** | **sub29fam29 = 1** |
|  |  |  |  |  |  |  |  |
| **(\*fam13 and \*fam17)** |  |  |  |  |  |  |  |
| **sub-keys01** | **sub-keys07** | **sub-keys11** | **sub-keys13** | **sub-keys17** | **sub-keys19** | **sub-keys23** | **sub-keys29** |
| **sub01fam01 = 1** | **sub07fam01 = 7** | **sub11fam01 = 11** | **sub13fam01 = 13** | **sub17fam01 = 17** | **sub19fam01 = 19** | **sub23fam01 = 23** | **sub29fam01 = 29** |
| **sub01fam07 = 7** | **sub07fam07 = 1** | **sub11fam07 = 23** | **sub13fam07 = 19** | **sub17fam07 = 11** | **sub19fam07 = 7** | **sub23fam07 = 29** | **sub29fam07 = 23** |
| **sub01fam11 = 11** | **sub07fam11 = 17** | **sub11fam11 = 1** | **sub13fam11 = 23** | **sub17fam11 = 7** | **sub19fam11 = 29** | **sub23fam11 = 13** | **sub29fam11 = 19** |
| **sub01fam13 = 13** | **sub07fam13 = 19** | **sub11fam13 = 17** | **sub13fam13 = 1** | **sub17fam13 = 29** | **sub19fam13 = 13** | **sub23fam13 = 11** | **sub29fam13 = 17** |
| **sub01fam17 = 17** | **sub07fam17 = 11** | **sub11fam17 = 13** | **sub13fam17 = 29** | **sub17fam17 = 1** | **sub19fam17 = 17** | **sub23fam17 = 19** | **sub29fam17 = 13** |
| **sub01fam19 = 19** | **sub07fam19 = 13** | **sub11fam19 = 29** | **sub13fam19 = 7** | **sub17fam19 = 23** | **sub19fam19 = 1** | **sub23fam19 = 17** | **sub29fam19 = 11** |
| **sub01fam23 = 23** | **sub07fam23 = 29** | **sub11fam23 = 7** | **sub13fam23 = 11** | **sub17fam23 = 19** | **sub19fam23 = 23** | **sub23fam23 = 1** | **sub29fam23 = 7** |
| **sub01fam29 = 29** | **sub07fam29 = 23** | **sub11fam29 = 19** | **sub13fam29 = 17** | **sub17fam29 = 13** | **sub19fam29 = 11** | **sub23fam29 = 7** | **sub29fam29 = 1** |

**‘compare sub-keys by different sort order name vs data.xlsk’**