



## Coded multiplication tables – Anouska

### Objectives

The relevant framework objective is:

- know by heart all multiplication facts up to 10 x 10 (key objective).

Additional objective:

- to explore strategies when solving problems.

### Activity description

The pupils solved coded versions of the 1 to 9 multiplication tables.

### Commentary

Anouska has used reasoning to confirm and check her results, which demonstrates performance at level 4 in Ma1.

Anouska has recalled multiplication facts when decoding the tables. This is typical of performance at level 4 in this aspect of Ma2.



## Items of work

Example of task sheet given to the pupils.

### Table V

H x A = A  
H x F = F  
H x G = G  
H x C = C  
H x H = H  
H x J = J  
H x D = D  
H x I = I  
H x B = B

### Table W

H x J = GJ  
H x F = BI  
H x B = D  
H x I = BG  
H x H = F  
H x G = H  
H x D = GA  
H x C = GB  
H x A = BC

### Table Y

C x G = BG  
C x J = AF  
C x H = JD  
C x I = DG  
C x B = C  
C x C = AC  
C x E = DE  
C x A = BE  
C x D = GD

### Table Z

D x F = BG  
D x A = D  
D x D = JA  
D x C = IH  
D x I = AJ  
D x H = FC  
D x J = HI  
D x G = CF  
D x B = GB



Anouska's explanation of how she decoded the 1 to 9 multiplication tables

Tables	Number	Reasoning:
1x		The answer will always be one digit up to nine times one.
2x		Four of the answers are write (single digits)
3x		Three of the answers are write (single digits)
4x		Two of the answers are write (single digits)

7x		D times F = D is 7 times 1 = 7 you can work this out by looking for another F (1) out of the answers. Which is three times seven = twenty-one (1F)
8x		Two of the answers have B (4) as the ten 1 is another two of the answers a B (4) as a unit.
9x		D times A = D (nine times One = nine) that means the A stands for a One so D times D = DA (8x9 = 81)



## About this entry

Subject: mathematics  
Year: 5  
Key stage: 2  
NC programme of study: Ma2p1a, Ma2p3f  
Attainment target: Ma1, Ma2  
Evidence for: level 4

Framework for teaching mathematics – objectives:

- Know by heart all multiplication facts up to 10 x 10.