fun with NUMBERS

Multiplication, using ① halves, ② doubles, ③ elimination and ④ addition …

General Rules: ① begin with the number you're going to multiply and reduce it by half until you arrive at "1"; ② any result ending in ".5" (*e.g.*, 15 ÷ 2 = 7.5 → 7.0) is rounded down; ③ each number in the "multiplying number" column are doubled; ④ each row, in the first column, beginning with an even number, would be eliminated; and ⑤ the final column of doubled numbers that were not eliminated are added together for the final result.

Step 1:

we begin by reducing the "multiplying number" into a series of halves, rounding any decimals down …

Halves	321 × 12	Doubles
321		
160.5 ~~x~~		
80		
40		
20		
10		
5		
2.5 ~~x~~		
1		

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Step 2:

next … we need to double the numbers, in the "Doubles" column, to deal with them next …

Halves	321 × 12	Doubles
321		12
160.5 ~~x~~		24
80		48
40		96
20		192
10		384
5		768
2.5 ~~x~~		1,536
1		3,072

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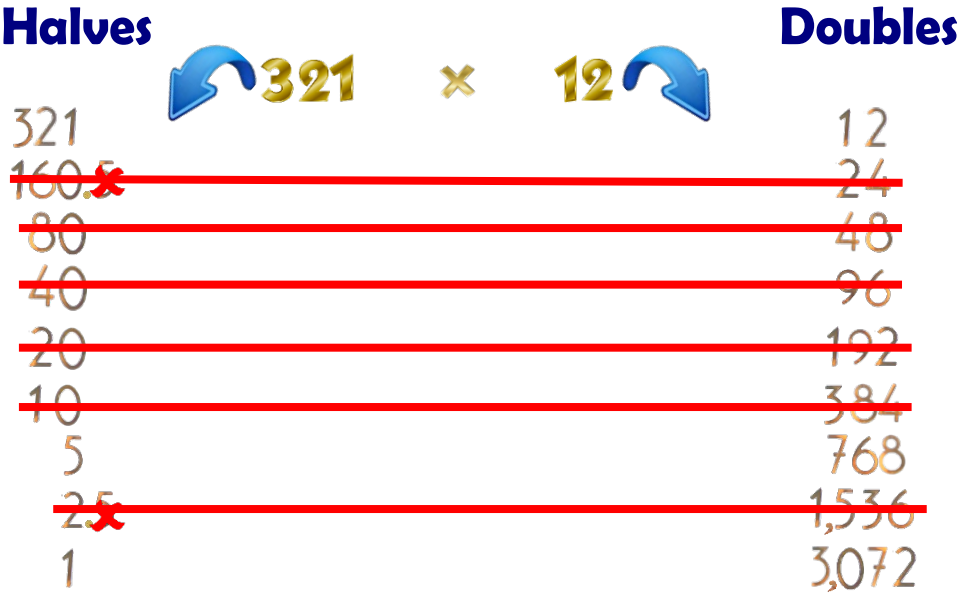
Step 3:

here, we need to eliminate each row that contains an even number under the "Halves" column …



Step 4:

finally … we need to add the numbers in the "Doubles" column to arrive at the final result …