

The Maze of Nines

Find the path through the numbers divisible by 9

Rule: a number is divisible by 9 when the sum of its digits is divisible by 9. Example: $468 \rightarrow 4 + 6 + 8 = 18 \rightarrow$ yes. Careful: $96 \rightarrow 9 + 6 = 15 \rightarrow$ no (15 is divisible by 3, but not by 9).

Start in the green square. Move up, down, left or right — never diagonally — and only onto numbers that are divisible by 9. Find the way to the red square. Some paths lead to dead ends!

Colour your path, then read the letters on it from START to FINISH.

START

369 C	145 J	36 U	495 R	117 F	333 U	207 L
180 O	54 L	468 O	484 B	153 D	389 M	252 L
135 H	51 C	90 D	84 R	189 Y	41 N	171 E
99 N	294 C	470 W	274 H	319 H	351 M	81 A
327 B	456 M	97 Q	419 P	126 Z	78 P	144 V
96 C	242 N	405 J	342 Q	45 H	225 B	324 E
461 R	332 D	258 X	161 M	72 Y	323 J	297 S

FINISH

The letters on the path spell:

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Question: how many numbers in the maze are divisible by 3 but NOT by 9? Find at least three:

_____, _____, _____

Answer key

START

369 C	145 J	36 O	495 R	117 F	333 U	207 L
180 O	54 L	468 O	484 B	153 D	389 M	252 L
135 H	51 C	90 D	84 R	189 Y	41 N	171 E
99 N	294 C	470 W	274 H	319 H	351 M	81 A
327 B	456 M	97 Q	419 P	126 Z	78 P	144 Y
96 C	242 N	405 J	342 Q	45 H	225 B	324 E
461 R	332 D	258 X	161 M	72 Y	323 J	297 S

FINISH

Path: 369 → 180 → 54 → 468 → 36 → 495 → 117 → 333 → 207 → 252 → 171 → 81 → 144 → 324 → 297. The letters spell COLOURFUL LEAVES. The other multiples of 9 in the maze (135, 99, 90, 153, 189, 351, 405, 342, 45, 225, 126, 72) are dead-end branches.

Divisible by 3 but not by 9: 51, 78, 84, 96, 258, 294, 327, 456.