Residuos minimos

Encuentre los residuos minimos módulo 10 de los siguientes números:

$$17, 50, 6, -1, -38$$

~ Clases residuales modulo 10

$[0]_{10} = \{\dots -40, -30, -20, -10, 0, 10, 20, 30, 40, \boxed{50} \dots \}$

$[1]_{10} = \{\dots -39, -29, -19, -9, 1, 11, 21, 31, 41, 51 \dots \}$

$[2]_{10} = \{\dots \boxed{-38}, -28, -18, -8, 2, 12, 22, 32, 42, 52 \dots \}$

$[3]_{10} = \{\dots -37, -27, -17, -7, 3, 13, 23, 33, 43, 53 \dots \}$

$[4]_{10} = \{\dots -36, -26, -16, -6, 4, 14, 24, 34, 44, 54 \dots \}$

$[5]_{10} = \{\dots -35, -25, -15, -5, 5, 15, 25, 35, 45, 55 \dots \}$

$[6]_{10} = \{\dots -34, -24, -14, -4, \boxed{6}, 16, 26, 36, 46, 56 \dots \}$

$[7]_{10} = \{\dots -33, -23, -13, -3, 7, \boxed{17}, 27, 37, 47, 57 \dots \}$

$[8]_{10} = \{\dots -32, -22, -12, -2, 8, 18, 28, 38, 48, 58 \dots \}$

$[9]_{10} = \{\dots -31, -21, -11, \boxed{-1}, 9, 19, 29, 39, 49, 59 \dots \}$

$17 \equiv 7 \pmod{10}$ porque $17 = 10 \cdot 1 + \boxed{7} \rightarrow 0 \leq 7 < 10$

$\qquad\qquad\qquad\qquad\qquad y \quad 7 = 0 \cdot 10 + \boxed{7}$

$50 \equiv 0 \pmod{10}$ porque $50 = 10 \cdot 5 + \boxed{0} \rightarrow 0 \leq 0 < 10$

$\qquad\qquad\qquad\qquad\qquad y \quad 0 = 0 \cdot 10 + \boxed{0}$

$6 \equiv 6 \pmod{10}$ porque $6 = 10 \cdot 0 + \boxed{6} \rightarrow 0 \leq 6 < 10$

$\qquad\qquad\qquad\qquad\qquad y \quad 6 = 0 \cdot 10 + \boxed{6}$

$-1 \equiv 9 \pmod{10}$ porque $-1 = 10 \cdot -1 + \boxed{9} \rightarrow 0 \leq 9 < 10$

$$y \quad 9 = 0 \cdot 10 + \boxed{9}$$

$-38 \equiv 2 \pmod{10}$ porque $-38 = 10 \cdot -4 + \boxed{2} \rightarrow 0 \leq 2 < 10$

$$y \quad 2 = 0 \cdot 10 + \boxed{2}$$

~ Clases residuales modulo 3

$[0]_3 = \{ \ldots -12, -9, -6, -3, 0, ③, 6, ⑨, 12, 15 \ldots \}$

$[1]_3 = \{ \ldots -11, -8, -5, ⊖2, 1, 4, 7, 10, 13, 16 \ldots \}$

$[2]_3 = \{ \ldots ⊖10, -7, -4, -1, 2, 5, 8, 11, 14, ⑰ \ldots \}$

$17 \equiv 2 \ (mod \ 3)$ porque $17 = 3 \cdot 5 + ② \rightarrow 0 \leq 2 < 3$

$$y \quad 2 = 0 \cdot 3 + ②$$

$9 \equiv 0 \ (mod \ 3)$ porque $9 = 3 \cdot 3 + ⓪ \rightarrow 0 \leq 0 < 3$

$$y \quad 0 = 0 \cdot 3 + ⓪$$

$-2 \equiv 1 \ (mod \ 3)$ porque $-2 = 3 \cdot -1 + ① \rightarrow 0 \leq 1 < 3$

$$y \quad 1 = 0 \cdot 3 + ①$$

$-10 \equiv 2 \ (mod \ 3)$ porque $-10 = 3 \cdot -4 + ② \rightarrow 0 \leq 2 < 3$

$$y \quad 2 = 0 \cdot 3 + ②$$

$3 \equiv 0 \ (mod \ 3)$ porque $3 = 3 \cdot 1 + ⓪ \rightarrow 0 \leq 0 < 3$

$$y \quad 0 = 0 \cdot 3 + ⓪$$